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Date: 09/29/2000

Time: 09:29

Search Terms

PHIC
ERIOR
E
MENT
ERE
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WPOINT
EWPOINT AND 2)

	Total	USPAT	USOCR	EPO	JPO	Derwent
1	52615					
2	480417					
3	1403868					
4	183948					
5	32273					
6	1588120					
7	41978					
8	82					

	IBM TDB
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	U	1	Title	Current OR
1	☐	☐	Apparatus and method for monitoring intraocular and blood pressure by non-contact contour measurement	600/405
2	☐	☐	Interaction spheres of three-dimensional objects in three-dimensional workspace displays	345/355
3	☐	☐	Silver halide photographic emulsion	430/567
4	☐	☐	Interactive construction of 3D models from panoramic images	345/425
5	☐	☐	Endoscope form detecting apparatus in which coil is fixedly mounted by insulating member so that form is not deformed within endoscope	600/117
6	☐	☐	3D virtual reality multi-user interaction with superimposed positional information display for each user	345/435
7	☐	☐	System and method for radiological image formation	378/182
8	☐	☐	Non-Subjective Valuing.COPYRGT. the computer aided calculation, appraisal and valuation of anything and anybody	705/400
9	☐	☐	Rendering method and apparatus	345/425
10	☐	☐	Method and apparatus for simulating movement in multidimensional space with polygonal projections from subhemispherical imagery	345/419
11	☐	☐	Method and apparatus for synthetic viewpoint imaging	600/411

	Current XRef	Retrieval Classif	Inventor	S	C	P	2	3
1	600/398 ;		Dublin, Jr., Wilbur Leslie , et al.	☒	☐	☐	☐	☐
2	345/349		Berry, Richard Edmond , et al.	☒	☐	☐	☐	☐
3	430/604		Morimura, Kimiyasu	☒	☐	☐	☐	☐
4			Shum, Heung-Yeung , et al.	☒	☐	☐	☐	☐
5	600/424		Taniguchi, Akira , et al.	☒	☐	☐	☐	☐
6			Miyashita, Ken , et al.	☒	☐	☐	☐	☐
7	430/966		Verbeeck, Ann , et al.	☒	☐	☐	☐	☐
8	705/1		Vig, Tommy	☒	☐	☐	☐	☐
9	345/426 ; 345/430 ; 345/434		Aono, Masaki , et al.	☒	☐	☐	☐	☐
10			Golin, Stuart J. , et al.	☒	☐	☐	☐	☐
11	600/414 ; 600/424		Acker, David E.	☒	☐	☐	☐	☐

	U	1	Title	Current OR
12	☐	☐	Vallian/geometric hexagon opting symbolic Tesseract V/GHOST	345/419
13	☐	☐	Interactive authoring of 3D scenes and movies	345/419
14	☐	☐	System and method for increasing the performance for real-time rendering of three-dimensional polygonal data	345/419
15	☐	☐	Method for creating progressive simplicial complexes	345/441
16	☐	☐	System and method for increasing performance by efficient use of limited resources via incremental fetching, loading and unloading of data assets of three-dimensional worlds based on transient asset priorities	345/419
17	☐	☐	Multi-display apparatus	345/1
18	☐	☐	Automatic analysis in virtual endoscopy	345/420
19	☐	☐	Silver halide photographic emulsion	430/567
20	☐	☐	Visibility calculations for 3D computer graphics	345/421
21	☐	☐	Rendering an image using lookup tables giving illumination values for each light source by direction and distance	345/426
22	☐	☐	Method and system for high performance computer-generated virtual environments	345/419

	Current XRef	Retrieval Classif	Inventor	S	C	P	2	3
12	345/355 ; 345/357		Wahl, Larry E.	☒	☐	☐	☐	☐
13			Carey, Richard Joseph , et al.	☒	☐	☐	☐	☐
14			Kent, James R.	☒	☐	☐	☐	☐
15			Popovic, Jovan , et al.	☒	☐	☐	☐	☐
16	345/421		Woods, Daniel J. , et al.	☒	☐	☐	☐	☐
17	348/36 ; 434/44		Ohishi, Tetsu , et al.	☒	☐	☐	☐	☐
18	345/419		Vining, David J. , et al.	☒	☐	☐	☐	☐
19	430/569		Maruyama, Yoichi	☒	☐	☐	☐	☐
20	345/422		Lim, Hong Lip	☒	☐	☐	☐	☐
21	345/427		Penna, David E.	☒	☐	☐	☐	☐
22	345/430		McDowall, Ian E. , et al.	☒	☐	☐	☐	☐

	U	1	Title	Current OR
23	☐	☐	Silver halide photographic material and photographic element	430/213
24	☐	☐	Silver halide photographic light-sensitive material	430/551
25	☐	☐	Immersive video, including video hypermosaicing to generate from multiple video views of a scene a three-dimensional video mosaic from which diverse virtual video scene images are synthesized, including panoramic, scene interactive and stereoscopic images	345/419
26	☐	☐	Endoscope form detecting apparatus in which coil is fixedly mounted by insulating member so that form is not deformed within endoscope	600/424
27	☐	☐	Three-dimensional graphic apparatus simplifying neighboring arrangement	345/433

	Current XRef	Retrieval Classif	Inventor	S	C	P	2	3
23	430/203 ; 430/206 ; 430/215 ; 430/217 ; 430/220 ; 430/227 ; 430/230 ; 430/231 ; 430/232 ; 430/404 ; 430/503 ; 430/523 ; 430/527 ; 430/539 ; 430/546 ; 430/608 ; 430/631 ; 430/950 ; 430/961		Aono, Toshiaki	☒	☐	☐	☐	☐
24	430/264 ; 430/448 ; 430/598 ; 430/607 ; 430/611 ; 430/613 ; 430/614 ; 430/615		Hirano, Katsumi	☒	☐	☐	☐	☐
25	348/13		Moezzi, Saied , et al.	☒	☐	☐	☐	☐
26			Taniguchi, Akira , et al.	☒	☐	☐	☐	☐
27	345/419 ; 700/96		Hirota, Katsuhiko , et al.	☒	☐	☐	☐	☐

	U	1	Title	Current OR
28	☐	☐	Apparatus for modeling three dimensional information	345/419
29	☐	☐	Portable measurement system using image and point measurement devices	356/376
30	☐	☐	Computer system with improved pixel processing capabilities	345/505
31	☐	☐	Photovoltaic device	136/258
32	☐	☐	Method and apparatus for converting a two dimensional motion picture into a three dimensional motion picture	345/473
33	☐	☐	Structured coil electromagnets for magnetic resonance imaging	335/296
34	☐	☐	Apparatus for modelling interaction of rigid bodies	703/6
35	☐	☐	Industrial robot with servo	318/568.22
36	☐	☐	Direct rendering of textured height fields	345/428
37	☐	☐	Processing composition and processing method for silver halide photographic materials	430/436
38	☐	☐	3D dynamic image production system with automatic viewpoint setting	345/419
39	☐	☐	Process for producing silver halide photographic material	430/539
40	☐	☐	Silver halide photographic material	430/584
41	☐	☐	Geometrically efficient self-inflating seat cushion	5/654

	Current XRef	Retrieval Classif	Inventor	S	C	P	2	3
28			Watanabe, Mutsumi , et al.	☒	☐	☐	☐	☐
29	345/419 ; 356/375 ; 382/285 ; 702/172		Corby, Jr., Nelson Raymond , et al.	☒	☐	☐	☐	☐
30	345/441 ; 345/501 ; 345/503 ; 345/522		Neave, John Walter , et al.	☒	☐	☐	☐	☐
31	136/249 ; 257/458		Fujioka, Yasushi , et al.	☒	☐	☐	☐	☐
32	345/419 ; 345/433 ; 352/50		Palm, Charles S.	☒	☐	☐	☐	☐
33	324/318 ; 335/216 ; 335/299		Pissanetzky, Sergio , et al.	☒	☐	☐	☐	☐
34			Goyal, Suresh , et al.	☒	☐	☐	☐	☐
35	318/568.18 ; 318/621 ; 901/9		Eismann, Paul H. , et al.	☒	☐	☐	☐	☐
36	345/419 ; 345/421 ; 345/427		Cosman, Michael A.	☒	☐	☐	☐	☐
37	430/440 ; 430/441 ; 430/446 ; 430/483 ; 430/490		Morishima, Shinnichi , et al.	☒	☐	☐	☐	☐
38	348/229		Fukui, Mika , et al.	☒	☐	☐	☐	☐
39	430/527 ; 430/532 ; 430/533 ; 430/537 ; 430/640 ; 430/642 ; 430/930		Miyamoto, Hajime , et al.	☒	☐	☐	☐	☐
40	430/573 ; 430/576		Kato, Takashi , et al.	☒	☐	☐	☐	☐
41	297/DIG.3 ; 36/43 ; 5/655.3		Johnson, Mark C.	☒	☐	☐	☐	☐

	U	1	Title	Current OR
42	☐	☐	High speed, amplitude variable thrust control method	60/204
43	☐	☐	Composition having a fixing ability for photography and method for processing photographic materials with the same	430/393
44	☐	☐	Apparatus for displaying multidimensional information	345/440
45	☐	☐	Direct display of CSG expression by use of depth buffers	345/422
46	☐	☐	Structured coil electromagnets for magnetic resonance imaging and method for fabricating the same	324/319
47	☐	☐	Segmented torus screen	353/94
48	☐	☐	Silver halide color photographic material	430/507
49	☐	☐	Evacuated two-phase head-transfer systems	165/272
50	☐	☐	Method for forming images	430/264
51	☐	☐	High speed, amplitude variable thrust control	60/233

	Current XRef	Retrieval Classif	Inventor	S	C	P	2	3
42	239/102.2 ; 251/129.2 ; 60/233 ; 60/258		Stone, William C.	☒	☐	☐	☐	☐
43	430/455 ; 430/459 ; 430/460		Kojima, Tetsuro , et al.	☒	☐	☐	☐	☐
44	345/419 ; 345/427 ; 700/28		Nonaka, Hisanori , et al.	☒	☐	☐	☐	☐
45	345/420 ; 345/426		Epstein, David A. , et al.	☒	☐	☐	☐	☐
46	29/602.1 ; 324/320 ; 335/296		Pissanetzky, Sergio	☒	☐	☐	☐	☐
47	359/451		Gersuk, Stephen H. , et al.	☒	☐	☐	☐	☐
48	430/512 ; 430/546 ; 430/551 ; 430/557 ; 430/931		Yoneyama, Hiroyuki	☒	☐	☐	☐	☐
49	123/41.21 ; 123/41.26 ; 126/588 ; 126/590 ; 165/104.14 ; 165/104.25 ; 165/104.27 ; 165/299 ; 165/300		Molivadas, Stephen	☒	☐	☐	☐	☐
50	430/219 ; 430/265 ; 430/487 ; 430/544 ; 430/598 ; 430/957		Okamura, Hisashi , et al.	☒	☐	☐	☐	☐
51	239/102.2 ; 251/129.2 ; 60/258		Stone, William C.	☒	☐	☐	☐	☐

	U	1	Title	Current OR
52	☐	☐	Method for making silver halide emulsion, photosensitive materials using the same, and methods of recording images using the photosensitive materials	430/568
53	☐	☐	Silver halide photographic material having magnetic recording member	430/496
54	☐	☐	Method for making silver halide emulsion, photosensitive materials using the same, and methods of recording images using the photosensitive materials	430/568
55	☐	☐	Industrial robot with servo	318/568.11
56	☐	☐	Silver halide photographic material	430/264
57	☐	☐	Panoramic display system	348/39
58	☐	☐	Multiple depth buffers for graphics and solid modelling	345/422
59	☐	☐	Motion controller for redundant or nonredundant linkages	700/263
60	☐	☐	Industrial robot with servo	414/729
61	☐	☐	Industrial robot with controller	700/262
62	☐	☐	Porous artificial vessel	623/1.39
63	☐	☐	Valve pistol for a high pressure cleaning device	239/526
64	☐	☐	Dancer roller	226/118.3

	U	1	Title	Current OR
65	☐	☐	Shaping geometric objects by cumulative translational sweeps	345/352
66	☐	☐	Elastomeric high torque, constant velocity joint	464/90
67	☐	☐	Tailoring tilt in an elastomeric high torque, constant velocity joint	384/221
68	☐	☐	Accommodating axial load in an elastomeric high torque, constant velocity joint	464/90
69	☐	☐	Memory system	365/230.04
70	☐	☐	System for interrelating sound transducers or sound sources and their environment	181/175
71	☐	☐	Image processing system	348/580
72	☐	☐	Lighting unit	315/46
73	☐	☐	Optical particle detector	356/338
74	☐	☐	Process and apparatus for the non-intrusive measurement of circulatory parameters	600/494
75	☐	☐	Intrauterine contraceptive device	128/833
76	☐	☐	Absorber element for pebble-bed reactors	376/226
77	☐	☐	Building structures	52/81.4
78	☐	☐	Switch mechanisms	335/207

	Current XRef	Retrieval Classif	Inventor	S	C	P	2	3
52	430/569 ; 430/570 ; 430/583 ; 430/584 ; 430/585 ; 430/593 ; 430/600 ; 430/613 ; 430/627 ; 430/642		Urabe, Shigeharu , et al.	☒	☐	☐	☐	☐
53	428/692 ; 428/694B ; 430/501		Sakakibara, Yoshio	☒	☐	☐	☐	☐
54	430/569 ; 430/570 ; 430/583 ; 430/584 ; 430/585 ; 430/593 ; 430/600 ; 430/613 ; 430/627 ; 430/642		Urabe, Shigeharu , et al.	☒	☐	☐	☐	☐
55	318/568.1 ; 318/568.13 ; 700/245 ; 901/15 ; 901/24 ; 901/28		Karlen, James P. , et al.	☒	☐	☐	☐	☐
56	430/544 ; 430/566 ; 430/598 ; 430/957		Okamura, Hisashi , et al.	☒	☐	☐	☐	☐
57	348/383		Ritchey, Kurtis J.	☒	☐	☐	☐	☐
58	345/501 ; 345/509		Rossignac, Jaroslaw R. , et al.	☒	☐	☐	☐	☐
59	318/568.19 ; 700/251 ; 901/15		Vold, Harvard I. , et al.	☒	☐	☐	☐	☐
60	74/479.01 ; 901/15 ; 901/24 ; 901/28		Karlen, James P. , et al.	☒	☐	☐	☐	☐
61	901/15		Vold, Havard I.	☒	☐	☐	☐	☐
62	606/153		Kira, Kazuaki	☒	☐	☐	☐	☐
63	239/583 ; 239/590		Suttner, Wolfgang	☒	☐	☐	☐	☐
64	226/190 ; 226/195 ; 242/615.12		Jones, Charles R.	☒	☐	☐	☐	☐

	Current XRef	Retrieval Classif	Inventor	S	C	P	2	3
65	345/420 ; 345/442 ; 703/1		Evans, Roger C. , et al.	☒	☐	☐	☐	☐
66	384/221 ; 416/134A ; 464/89 ; 74/572 ; 74/574		Byrnes, Francis E. , et al.	☒	☐	☐	☐	☐
67	384/124 ; 384/125 ; 384/620 ; 416/134A		Byrnes, Francis E. , et al.	☒	☐	☐	☐	☐
68	267/141.1 ; 403/228 ; 416/102 ; 416/134A ; 416/141 ; 416/148 ; 464/904		Ferris, Donald L.	☒	☐	☐	☐	☐
69			Hooks, Jr., John T.	☒	☐	☐	☐	☐
70	181/296		Prohs, John R.	☒	☐	☐	☐	☐
71	345/427 ; 348/121 ; 348/552 ; 382/113 ; 382/284 ; 396/322		Hooks, Jr., John T.	☒	☐	☐	☐	☐
72	315/177 ; 315/276 ; 315/92		Brown, Thomas A. , et al.	☒	☐	☐	☐	☐
73	250/574 ; 340/630		Snowman, Lawrence R.	☒	☐	☐	☐	☐
74			Grangirard, Henri , et al.	☒	☐	☐	☐	☐
75			Von Kesseru, Istvan , et al.	☒	☐	☐	☐	☐
76	376/327 ; 976/DIG.121		Lohnert, Gunter , et al.	☒	☐	☐	☐	☐
77	52/82 ; D25/13		Grosser, Christian E. , et al.	☒	☐	☐	☐	☐
78	200/521 ; 335/188		Rich, Donald S. , et al.	☒	☐	☐	☐	☐

	U	1	Title	Current OR
79	☐	☐	Magnetometer using superconducting rotating body	324/248
80	☐	☐	GRAPHIC INDICIA VIDEO SIGNAL ACQUISITION TRANSMISSION AND REPRODUCTION SYSTEM	358/410
81	☐	☐	OUTPUT KEYBOARD APPARATUS AND SIGNAL TRANSLATING METHODS THEREFOR	341/33
82	☐	☐	METHOD OF STIRRING MATERIALS AND APPARATUS THEREFOR	366/265 ;

	Current XRef	Retrieval Classif	Inventor	S	C	P	2	3
79	505/845		Fletcher, James C. Administrator of the National Aeronautics and Space , et al.	☒	☐	☐	☐	☐
80	358/485 ; 379/100.17		Campbell, John Scott , et al.	☒	☐	☐	☐	☐
81	178/17C ; 400/477		Silverberg, Morton	☒	☐	☐	☐	☐
82			Schoppe, Fritz	☒	☐	☐	☐	☐

Set	Items	Description
S1	159	P()(SURFACE? OR SPHERE? OR PLANE? ?) OR PSURFACE? OR PSPHERE?
S2	11482	VIEWPOINT? OR VIEW(1N)POINT? ? OR DIRECTION(1W)VIEW? ?
S3	838	(TEXTURE? OR TEXEL?)(5N)(MAP? ? OR MAPP? OR APPLICATION? OR APPLY?)
S4	118	(FULL?(2N)SURROUND? OR WRAP?()AROUND OR IMMERSION?)(5N)(SCENE? ? OR IMAGE? OR DATA OR PICTURE? ? OR GRAPHIC? ?)
S5	5	SAMPL?(5N)(VISIBLE OR VIRTUAL OR DIGITAL)(3N)(WORLD? OR ENVIRON?)
S6	0	S1 AND S2 AND S3 AND (S4 OR S5)
S7	3344096	SURFACE? OR SPHERE? OR PLANE OR PLANES
S8	0	S7 AND S2 AND S3 AND (S4 OR S5)
S9	0	S2 AND S3 AND S4
S10	0	S3 AND S4
S11	24	(S1 OR S7) AND S2 AND (S3 OR S4)
S12	2267	((FULL? OR COMPLETE? OR TOTAL? OR ENTIRE?)(2N)SURROUND? OR WRAP?()AROUND OR IMMERSION OR ENVELOP?)(10N)(SCENE? OR IMAGE? OR DATA OR PICTURE? OR GRAPHIC? ?)
S13	0	(S1 OR S7) AND S2 AND S3 AND S12
S14	0	S2 AND S3 AND S12
S15	0	S3 AND S12
S16	3	AU=OXAAL F?
S17	3	S16 NOT S11
S18	1	S2 AND S4
S19	5	S2 AND S12
S20	4	S19 NOT (S11 OR S17)
S21	1	S19 NOT S20
S22	17711	(FULL? ? OR COMPLETE? OR TOTAL? OR ENTIRE?)(2N)SURROUND? OR WRAP?()AROUND OR (IMMERS? OR ENVELOP?)(3N)(IMAGE? OR SCENE? - OR DATA OR PICTURE OR GRAPHIC? ? OR SPACE)
S23	0	S22 AND S2 AND S3
S24	0	S22 AND S3

?

11/5/1   (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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012650211   **Image available**
WPI Acc No: 1999-456316/199938
XRPX Acc No: N99-341104
Game controller in interactive race car simulator system
Patent Assignee: MARIAH VISION3 ENTERTAINMENT LLC (MARI-N); ALCALA A
   (ALCA-I); AMBROSINO T J (AMBR-I); HILCHEY G (HILC-I); RINDGE T L (RIND-I)
   ; TAGGE J E (TAGG-I); TAGGE M J (TAGG-I)
Inventor: ALCALA A; AMBROSINO T J; HILCHEY G; RINDGE T L; TAGGE J E; TAGGE
   M J
Number of Countries: 003 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5919045	A	19990706	US 96751647	A	19961118	199938	B
WO 200041156	A1	20000713	WO 98US27861	A	19981231	200037	N

Priority Applications (No Type Date): US 96751647 A 19961118; WO 98US27861
   A 19981231
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5919045	A		18	G09B-009/00	
WO 200041156	A1	E		G09B-009/04	

   Designated States (National): CA JP

Abstract (Basic): US 5919045 A
      NOVELTY - A game controller (12) in signal communication with an
   input unit (18), motion base control unit (22) and image generator
   (14), generates signals for controlling the image generator and motion
   base control unit according to the input signal received from the input
   unit.
      DETAILED DESCRIPTION - Input signals generated by the input unit is
   received by the image generator. The image generator generates signals
   indicative of set of pre-recorded digital images which is indicative of
   a select number of initial set processed, pre-recorded digital images.
   An image presentation unit (26) picks up the set of images from the
   generator and presents it to the user.
      A motion base (24) connected to the driver module moves the driver
   module along an axis in accordance to the base control signal generated
   by the motion base control unit. The image presentation unit projects
   the image on a mirror so as to generate the next set of images. The
   image generator generates the **texture   map** from **point** -of-**view**
   position and projects them onto **surface** polygons of a visual element.
      USE - For receiving input signals indicative of actions and for
   displaying images in an interactive vehicle simulator system.
      ADVANTAGE - The motion to a driver is imparted by means of
   pneumatic motion base. The images displayed are close to the driver,
   but does not cause strain to the eyes. The images generated by the
   system are of realistic video-quality with a perceived depth.
      DESCRIPTION OF DRAWING(S) - The figure shows a schematic view of a
   game controller in interactive race car simulator system.
      Game controller (12)
      Image generator (14)
      Input unit (18)
      Motion base control unit (22)
      Motion base (24)
      Image presentation unit (26)
      pp; 18 DwgNo 1/13
Title Terms: GAME; CONTROL; INTERACT; RACE; CAR; SIMULATE; SYSTEM
Derwent Class: P85; T01; W04
International Patent Class (Main): G09B-009/00; G09B-009/04
International Patent Class (Additional): G09B-009/08
File Segment: EPI; EngPI

DIALOG(R)File 350:Derwent WPIX
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012431622   **Image available**
WPI Acc No: 1999-237730/199920
XRPX Acc No: N99-177002
**Three dimensional topography model display device for game machine,
simulation apparatus, car navigation apparatus - displays image which is
mapped to virtual transparent** surface **and is observed from** viewpoint
Patent Assignee: NOMURA SOGO KENKYUSHO KK (NOMU-N)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 11066277	A	19990309	JP 97221783	A	19970818	199920	B

Priority Applications (No Type Date): JP 97221783 A 19970818
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 11066277	A		12	G06T-001/00	

Abstract (Basic): JP 11066277 A
        NOVELTY - A virtual **surface** setting unit (3) establishes a
    transparent **surface** along the contour line of a 3D topography model
    which is input by an input unit (2). A photographed image is mapped to
    the transparent virtual **surface** of a **texture** **mapping** unit (4). An
    image observed from the position of a **viewpoint** is displayed on a
    display unit (6).
        USE - For computer graphics display in game machine, simulation
    apparatus, car navigation apparatus.
        ADVANTAGE - Displays realistic image. Reduces amount of data to be
    processed. DESCRIPTION OF DRAWING(S) - The drawing indicates a block
    diagram of a device. (2) Input unit; (3) Virtual **surface** setting
    unit; (4) **Texture** **mapping** unit; (6) Display unit.
        Dwg.1/6
Title Terms: THREE; DIMENSION; TOPOGRAPHICAL; MODEL; DISPLAY; DEVICE; GAME;
  MACHINE; SIMULATE; APPARATUS; CAR; NAVIGATION; APPARATUS; DISPLAY; IMAGE;
  MAP; VIRTUAL; TRANSPARENT; **SURFACE** ; OBSERVE
Derwent Class: T01
International Patent Class (Main): G06T-001/00
International Patent Class (Additional): G06F-017/50; G06T-017/00
File Segment: EPI

DIALOG(R)File 350:Derwent WPIX
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012264778   **Image available**
WPI Acc No: 1999-070884/199906
XRPX Acc No: N99-051788
Generating image of 3-dimensional object - includes determination of
  direction **of** view **giving least deviation of elements** surfaces **and
determination of 2-dimensional image whereby image is formed having shape
determined by stored parameters**
Patent Assignee: BRITISH TELECOM PLC (BRTE)
Inventor: MORTLOCK A N; SHEPPARD P J; WALLIN N J
Number of Countries: 082 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9858351	A1	19981223	WO 98GB1772	A	19980617	199906	B
AU 9881164	A	19990104	AU 9881164	A	19980617	199921	
GB 2341070	A	20000301	WO 98GB1772	A	19980617	200014	
			GB 9927913	A	19991125		
EP 990224	A1	20000405	EP 98930876	A	19980617	200021	
			WO 98GB1772	A	19980617		

Priority Applications (No Type Date): EP 97304217 A 19970617

Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
WO 9858351   A1 E   49 G06T-015/10
    Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU
    CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR
    LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM
    TR TT UA UG US UZ VN YU ZW
    Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
    IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW
GB 2341070   A   G06T-015/10   Based on patent WO 9858351
EP 990224   A1 E   G06T-015/10   Based on patent WO 9858351
    Designated States (Regional): DE ES FR GB
AU 9881164   A   G06T-015/10   Based on patent WO 9858351

Abstract (Basic): WO 9858351 A
    All data defining an object, I.e. a head, are recorded in a store
(1) and a processor device (2) has access to the store and also to a
second store (3) containing programmes for operating the processor
device during the conventional steps. A second processor device (4)
with its own programme store (5) provides digitally coded images as a
video signal at an output (6), during, directly or after storage and/or
transmission, for a visual display device. The processors have
conventional input-output arrangements, typically keyboards (7,8), mice
(9,10) and visual displays (11,12).
    The first processor device has a general purpose memory (13), while
a mass storage (14) such as a disc drive is provided and the second
processor is provided with a memory and storages (15,16). For each
surface element of an image, a measure is determined being
representative of deviation of the **surface** of the element from the
normal to the **direction** of **view** , the direction of viewing
exhibiting least deviation is determined and an image is formed having
a shape determined by the stored parameters and having **surface** detail
determined by the 2-dimensional image.
    USE - Generation of image of 3-dimensional object by **application**
of **texture** to 3-dimensional image of object
    ADVANTAGE - Reduction of time to texture model
    Dwg.1/13
Title Terms: GENERATE; IMAGE; DIMENSION; OBJECT; DETERMINE; DIRECTION; VIEW
; DEVIATE; ELEMENT; **SURFACE** ; DETERMINE; DIMENSION; IMAGE; IMAGE;
FORMING; SHAPE; DETERMINE; STORAGE; PARAMETER
Derwent Class: T01
International Patent Class (Main): G06T-015/10
File Segment: EPI

11/5/4   **(Item 4 from file: 350)**
DIALOG(R)File 350:Derwent WPIX
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012006919   **Image available**
WPI Acc No: 1998-423829/199836
XRPX Acc No: N98-331126
Three dimensional game apparatus - projects each vertex of virtual
rectangular polygons arranged on virtual screen along texture plane
with virtual point as its projection centre
Patent Assignee: NAMCO LTD (NAMC-N)
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind   Date   Applicat No   Kind   Date   Week
JP 10177662   A   19980630 JP 97290465   A   19971007 199836 B

Priority Applications (No Type Date): JP 96297107 A 19961017
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
JP 10177662   A   14 G06T-017/00

Abstract (Basic): JP 10177662 A
    The apparatus has a co-ordinate calculation unit which calculates

and obtains texture co-ordinate of each vertex of multiple rectangular
polygons which are arranged on a screen. The **mapping** of the **texture**
designated by the texture co-ordinate to the rectangular polygon is
performed. A synthesising unit synthesis image arranged in rectangular
polygon within the field of view.
    The virtual **view   point** (30) defining a predetermined position
relationship with the texture **plane** (34) is specified along
predetermined direction and is set up on a virtual screen (32). Each
vertex of the virtual rectangular polygons (36-0-36-239) arranged on
the virtual screen is projected along the texture **plane** with virtual
point as its projection centre. The texture co-ordinate of the
projecting point is established as the texture co-ordinate of each
vertex of the rectangular polygon.
    ADVANTAGE - Synthesises quality background images with reduced
number of polygon shapes.
    Dwg.3/17
Title Terms: THREE; DIMENSION; GAME; APPARATUS; PROJECT; VERTEX; VIRTUAL;
  RECTANGLE; POLYGONAL; ARRANGE; VIRTUAL; SCREEN; TEXTURE; **PLANE** ; VIRTUAL
  ; POINT; PROJECT; CENTRE
Derwent Class: P36; T01; W02; W04
International Patent Class (Main): G06T-017/00
International Patent Class (Additional): A63F-009/22; G06T-015/00
File Segment: EPI; EngPI

  11/5/5   (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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011895812   **Image available**
WPI Acc No: 1998-312722/199827
XRPX Acc No: N98-245072
  Computer graphics image generating method - in which more than one
  texture is mapped **to same** surface, **and co-ordinate** maps **of**
  textures are shifted relative to each other when viewpoint **changes**
Patent Assignee: KONINK PHILIPS ELECTRONICS NV (PHIG); PHILIPS
  ELECTRONICS NV (PHIG); PHILIPS NORDEN AB (PHIG); US PHILIPS CORP
  (PHIG)
Inventor: VAN OVERVELD C W A M
Number of Countries: 019 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9822911	A1	19980528	WO 97IB1307	A	19971020	199827	B
EP 877991	A1	19981118	EP 97943112	A	19971020	199850	
			WO 97IB1307	A	19971020		
US 6049337	A	20000411	US 97972977	A	19971119	200025	
JP 2000504453	W	20000411	WO 97IB1307	A	19971020	200029	
			JP 98523384	A	19971020		

Priority Applications (No Type Date): EP 96203265 A 19961121
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9822911	A1	E	12	G06T-015/10	

    Designated States (National): JP
    Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LU MC
    NL PT SE

JP 2000504453	W		17	G06T-015/00	Based on patent WO 9822911
EP 877991	A1	E		G06T-015/10	Based on patent WO 9822911

    Designated States (Regional): DE FR GB

US 6049337	A			G06T-011/40	

Abstract (Basic): WO 9822911 A
    The image generation method involves selecting a **viewpoint**
relative to a **surface** , and determining an area in the image in which
the **surface** is visible as viewed from the **viewpoint** . A **texture** on
the area is **texture mapped** according to a co-ordinate map.
    At least a further **texture** is **texture mapped** on the area
according to a further co-ordinate map. A relative offset between the

co-ordinate map and ⬤ further co-ordinate map is adj⬤ed depending upon the **viewpoint** . A combination of the **mapped   texture** and the further **mapped   texture** in the area is rendered.

USE - Generating two-dimensional image of **surface** in higher dimensional model space in computer graphics applications.

ADVANTAGE - Enables mapping of modelled **surface** from three or higher dimensional space on area of pixels in two dimensional image, and **texture   mapping** pixels on area.

Dwg.3/5

Title Terms: COMPUTER; GRAPHIC; IMAGE; GENERATE; METHOD; MORE; ONE; TEXTURE ; MAP; **SURFACE** ; CO; ORDINATE; MAP; TEXTURE; SHIFT; RELATIVE; CHANGE
Derwent Class: T01
International Patent Class (Main): G06T-011/40; G06T-015/00; G06T-015/10
International Patent Class (Additional): G06T-011/00
File Segment: EPI

11/5/6   (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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011885575   **Image available**
WPI Acc No: 1998-302485/199827
XRPX Acc No: N98-237061
 Mirror- surface **rendering method for computer graphics - involves performing** texture   mapping **of image to** surface **of object with mirror** surface **and displaying result of** texture   mapping
Patent Assignee: IBM CORP (IBMC   ); INT BUSINESS MACHINES CORP (IBMC   )
Inventor: AONO M; OHBUCHI R; SHIMIZU K
Number of Countries: 002 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 10105734	A	19980424	JP 96230005	A	19960830	199827	B
US 6034691	A	20000307	US 97902270	A	19970729	200019	

Priority Applications (No Type Date): JP 96230005 A 19960830
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 10105734	A		16	G06T-015/00	
US 6034691	A			G06T-015/10	

Abstract (Basic): JP 10105734 A

The method involves rendering a three-dimensional space containing an object with a mirror **surface** . The **surface** of the object is divided into several polygonal components, e.g. triangles. A polyhedron, e.g. cube, with a predetermined point inside the three-dimensional space, is generated. A rendering process is performed from a predetermined point as a **viewpoint** to each **surface** of the polyhedron. The generated image is stored. The vector in each vertex of the polygonal component from the **viewpoint** is obtained.

The **surface** where the intersection of the vector and the polyhedron exists, when the predetermined point is made the starting point, is obtained. The **surface** where the intersection exists and the vector are used. The coordinate in the image corresponding to each vertex of the polygonal component is obtained and used. The **texture mapping** of the image to the **surface** of the object with the mirror **surface** is performed. The result of the **texture   mapping** is displayed.

ADVANTAGE - Offers mapping function covering all cubic directions of space and in which real-time control is possible. Enables high-speed packed reflect phenomenon.

Dwg.1/12

Title Terms: MIRROR; **SURFACE** ; RENDER; METHOD; COMPUTER; GRAPHIC; PERFORMANCE; TEXTURE; MAP; IMAGE; **SURFACE** ; OBJECT; MIRROR; **SURFACE** ; DISPLAY; RESULT; TEXTURE; MAP
Derwent Class: T01
International Patent Class (Main): G06T-015/00; G06T-015/10
File Segment: EPI

DIALOG(R)File 350:Derwent WPIX
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011634647   **Image available**
WPI Acc No: 1998-051775/199805
XRPX Acc No: N98-041161
 **Computer graphic system for producing dynamic image of continuous texture
     surface e.g terrain beneath aircraft - has active map memory that
 stores actively-stored portions of levels of texture as truncated pyramid
 and image system applies texture from levels of texture data in
 accordance with ranges defined by annular rings**
Patent Assignee: EVANS & SUTHERLAND COMPUTER CO (EVAN-N)
Inventor: ERDAHL A C; ROBINSON J A
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5699497	A	19971216	US 94197957	A	19940217	199805	B
			US 96613893	A	19960311		

Priority Applications (No Type Date): US 94197957 A 19940217; US 96613893 A
   19960311
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5699497	A		1	G06T-015/00	Cont of application US 94197957

Abstract (Basic): US 5699497 A
       The system includes a terrain storage for storing the terrain field
     representation data. A texture storage stores at least a first level
     and a second level of texture data. The first level provides a greater
     texture resolution of the terrain. The second level provides a lesser
     texture resolution of the terrain. An active map memory system is
     coupled to the texture storage to store a first portion of the first
     level and a second portion of the second level.
       The first portion spans a smaller **surface** area about the common
     centre and the second portion spans a larger **surface** area about the
     common centre. A paging structure is coupled to the active map memory
     system for selectively paging fresh texture data from the **texture**
     storage to the active **map** memory system in accordance with moving
   viewpoint . An image system processes the terrain representation data
     from the terrain storage and the selectively stored portions of
   texture data from the active **map** memory system to provide image data
     signals. A display device provides the dynamic image in accordance with
     the image data signals.
       ADVANTAGE - Organises and selectively pages portion of extremely
     large continuous terrain map with reasonably sized active memory while
     assuring that map data is available as needed.
       Dwg.1
Title Terms: COMPUTER; GRAPHIC; SYSTEM; PRODUCE; DYNAMIC; IMAGE; CONTINUOUS
   ; TEXTURE; **SURFACE** ; TERRAIN; BENEATH; AIRCRAFT; ACTIVE; MAP; MEMORY;
   STORAGE; ACTIVE; STORAGE; PORTION; LEVEL; TEXTURE; TRUNCATE; PYRAMID;
   IMAGE; SYSTEM; APPLY; TEXTURE; LEVEL; TEXTURE; DATA; ACCORD; RANGE;
   DEFINE; ANNULAR; RING
Derwent Class: T01
International Patent Class (Main): G06T-015/00
File Segment: EPI

DIALOG(R)File 350:Derwent WPIX
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011143375   **Image available**
WPI Acc No: 1997-121299/199712
XRPX Acc No: N97-099835
 Mapping and blending unit for volume rendering system - has volume data

in voxel memory and parameters provided to slice volume in view direction
for slice mapping and blending
Patent Assignee: MITSUBISHI DENKI KK (MITQ); MITSUBISHI ELECTRIC CORP
   (MITQ)
Inventor: KAMEYAMA M; NEGISHI H
Number of Countries: 005 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 758118	A2	19970212	EP 96110667	A	19960702	199712	B
JP 9050537	A	19970218	JP 95203191	A	19950809	199717	
US 5831623	A	19981103	US 96671685	A	19960628	199851	

Priority Applications (No Type Date): JP 95203191 A 19950809
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 758118	A2	E	41	G06T-017/00	

   Designated States (Regional): DE FR GB

JP 9050537	A		17	G06T-015/00	
US 5831623	A			G06T-011/40	

Abstract (Basic): EP 758118 A
       The volume rendering apparatus includes a microprocessor (10) which
   stores **points** of **view** coordinates, sampling intervals and vertices
   of the volume object and a mapping object. A voxel memory (11) stores
   coordinate and colour data for the three dimensional image. A parameter
   provider (12) receives coordinates of the **point** of **view** and object
   vertices.
       The volume object is sliced into a number of volume **planes**
   orthogonal to the **direction** of **view** and a number of **mapping**
   planes . These are **texture**   **mapped** and blended with three
   dimensional data for display.
       ADVANTAGE – Provides an accurate volume image by using accurate
   volume data of pixels rather than by interpolation.
       Dwg.1/29
Title Terms: MAP; BLEND; UNIT; VOLUME; RENDER; SYSTEM; VOLUME; DATA; VOXEL;
  MEMORY; PARAMETER; SLICE; VOLUME; VIEW; DIRECTION; SLICE; MAP; BLEND
Derwent Class: T01
International Patent Class (Main): G06T-011/40; G06T-015/00; G06T-017/00
File Segment: EPI

 11/5/9   (Item 9 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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011114064   **Image available**
WPI Acc No: 1997-091989/199709
XRPX Acc No: N97-075893
 Visualisation display for satellite environmental observation data – by
 providing viewpoint of whole earth region model, based on geometrical
 data of specific line direction and line, perpendicular to specific
 direction
Patent Assignee: HITACHI LTD (HITA)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 8329277	A	19961213	JP 95137637	A	19950605	199709	B

Priority Applications (No Type Date): JP 95137637 A 19950605
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 8329277	A		17	G06T-017/00	

Abstract (Basic): JP 8329277 A
       The satellite viewing method involves.computing the **viewpoint**
   position as an observation direction. A display model is projected on a
   display **surface** from the computed **viewpoint** position. **Texture**
   mapping is processed from the data observed by the projected display

model on the display ●rface . ●

An observation direction **viewpoint** of an earth model and the
displaying model of the earth whole region is provided, based on the
geometrical data of the mesh data of a specific line direction and the
line that intersects perpendicularly in the specific direction.

ADVANTAGE - Provides high-speed visualisation display and reduces
user operating load. Observes time sequential variation of earth
observation data easily. Eliminates coordinate transformation
processing in **viewpoint** movement.

Dwg.1/17

Title Terms: VISUAL; DISPLAY; SATELLITE; ENVIRONMENT; OBSERVE; DATA; WHOLE;
EARTH; REGION; MODEL; BASED; GEOMETRY; DATA; SPECIFIC; LINE; DIRECTION;
LINE; PERPENDICULAR; SPECIFIC; DIRECTION
Derwent Class: T01
International Patent Class (Main): G06T-017/00
File Segment: EPI

11/5/10   (Item 10 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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011013083   **Image available**
WPI Acc No: 1996-510033/199651
Related WPI Acc No: 1996-197426
XRPX Acc No: N96-429903
**Measurement appts. monitoring using two-dimensional distribution
measurement image data - by aligning** viewpoint **and angle of
distribution measurement projection image to space geometric model of
plant appts. in direction of measurement appts. position**
Patent Assignee: TOSHIBA KK (TOKE   )
Inventor: ARAKAWA A; HANEDA R; HATTORI Y; KANEMOTO S; TAI I; TSURUMAKI H
Number of Countries: 002   Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 8263133	A	19961011	JP 9569432	A	19950328	199651	B
US 5822450	A	19981013	US 95519894	A	19950828	199848	

Priority Applications (No Type Date): JP 9569432 A 19950328; JP 94206945 A
19940831
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 8263133	A		28	G05B-023/02	
US 5822450	A			G06K-009/00	

Abstract (Basic): JP 8263133 A
The method involves aligning a distribution measurement image data
to a corresp. projection figure of a plant appts. space geometric
model. The position and direction of a distribution measuring device
(1) is determined through a distribution measurement image data
alignment unit (2). A **texture   mapping** of the distribution
measurement image data is performed on the **surface** of the space
geometric model of the plant appts. based on the measurement machine
position and the direction determined by the distribution measurement
image data alignment unit.   .

The projected figure of the plant appts. space geometric model in
which the **texture   mapping** is performed, is patterned. The projected
image is displayed.

ADVANTAGE - Facilitates monitoring of appts. condition using
distribution measurement image data by displaying projected image of
space geometric model. Enables simple alignment of distribution
measurement image and space geometric-model data of plant appts.

Dwg.1/29

Title Terms: MEASURE; APPARATUS; MONITOR; TWO; DIMENSION; DISTRIBUTE;
MEASURE; IMAGE; DATA; ALIGN; ANGLE; DISTRIBUTE; MEASURE; PROJECT; IMAGE;
SPACE; GEOMETRY; MODEL; PLANT; APPARATUS; DIRECTION; MEASURE; APPARATUS;
POSITION
Derwent Class: S02; S03; T06

11/5/11   (Item 11 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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010135479   **Image available**
WPI Acc No: 1995-036730/199505
XRPX Acc No: N95-028895
**Game playing appts using image synthesiser - texture information attached
to polygons of shapes is stored on texture information store as image
information of different resolution**
Patent Assignee: NAMCO LTD (NAMC-N)
Inventor: SASAKI K
Number of Countries: 003 Number of Patents: 007
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9429813	A1	19941222	WO 94JP943	A	19940610	199505	B
GB 2284526	A	19950607	WO 94JP943	A	19940610	199526	
			GB 952639	A	19950210		
JP 7501579	X	19950706	WO 94JP943	A	19940610	199535	
			JP 95501579	A	19940610		
US 5577960	A	19961126	WO 94JP943	A	19940610	199702	
			US 95379679	A	19950626		
GB 2284526	B	19971210	WO 94JP943	A	19940610	199801	
			GB 952639	A	19950210		
JP 2000057371	A	20000225	JP 95501579	A	19940610	200021	
			JP 99227837	A	19940610		
JP 2000067263	A	20000303	JP 95501579	A	19940610	200023	
			JP 99227838	A	19940610		

Priority Applications (No Type Date): JP 93166495 A 19930610
Cited Patents: 01Jnl.Ref; EP 311081; JP 1205277; JP 3268186; JP 4238587; US
   4994989
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9429813	A1	J	41	G06F-015/72	

   Designated States (National): GB JP US

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2000057371	A		14	G06T-015/00	Div ex application JP 95501579
JP 2000067263	A		14	G06T-015/00	Div ex application JP 95501579
GB 2284526	A		41	G06T-017/40	Based on patent WO 9429813
JP 7501579	X		1	G06F-015/72	Based on patent WO 9429813
US 5577960	A		20	A63F-009/24	Based on·patent WO 9429813
GB 2284526	B			G06T-017/40	Based on patent WO 9429813

Abstract (Basic): WO 9429813 A
     The information about a three-dimensional object is stored in an
object data storage (26) as object information for displaying the
object using a plurality of shape models of different accuracies. The
object information accuracy of shape models is higher as the distance
between the **viewpoint** of a **viewpoint** coordinate system and the
three-dimensional object is shorter.
     The texture information storage (32) as image information having
different resolutions according to the shape models and the polygons
constituting the shape models. An image forming part (34) synthesizes
an image to be displayed by **mapping** the **texture** information of
accuracies corresponding to the polygons of a three-dimensional object
on the polygons of the object generated by a three-dimensional
arithmetic part (22) by transformation of perspective projection, and
displays it on the display (40).
     USE/ADVANTAGE - As image synthesiser. Provision for of displaying
image of three-dimensional object with small number of polygons in real
time with high resolution.
     Dwg.4a/12
Title Terms: GAME; PLAY; APPARATUS; IMAGE; SYNTHESISER; TEXTURE;

INFORMATION; ATTACH; P●GONAL; SHAPE; STORAGE; TEXTURE,●NFORMATION;
STORAGE; IMAGE; INFORMATION; RESOLUTION
Derwent Class: P36; T01; W04
International Patent Class (Main): A63F-009/24; G06F-015/72; G06T-015/00;
   G06T-017/40
International Patent Class (Additional): A63F-013/00; G06T-011/00;
   G06T-017/00
File Segment: EPI; EngPI

11/5/12   (Item 12 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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009675580   **Image available**
WPI Acc No: 1993-369133/199346
XRPX Acc No: N93-284918
**Integral virtual reality, image recording and projection audiovisual
appts. - has alternating images for left and right eye projected onto
screen with sensors to allow** image **search to obtain** immersion **effect**
Patent Assignee: DOLZ GARCIA R (GARC-I); GADEA PEREZ J P (PERE-I); JP
   PRODUCCIONES SL (JPPR-N); PROCTER & GAMBLE CO (PROC); GARCIA R D
   (GARC-I); PEREZ J P G (PERE-I)
Inventor: DOLZ GARCIA R; GADEA PEREZ J P; GADEA PEREZ J; GARCIA R D; PEREZ
   J P
Number of Countries: 026 Number of Patents: 011
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9322879	A2	19931111	WO 93ES34	A	19930427	199346	B
ES 2043549	A2	19931216	ES 92907	A	19920430	199403	
NO 9304815	A	19940204	WO 93ES34	A	19930430	199414	
			NO 934815	A	19931227		
EP 592652	A1	19940420	EP 93911514	A	19930427	199416	
			WO 93ES34	A	19930427		
FI 9305949	A	19940228	WO 93ES34	A	19930427	199418	
			FI 935949	A	19931230		
TW 224163	A	19940521	TW 92105101	A	19920629	199425	
JP 7500231	W	19950105	JP 93518948	A	19930427	199511	
			WO 93ES34	A	19930427		
WO 9322879	A3	19931223	WO 93ES34	A	19930427	199514	
ES 2043549	B1	19961001	ES 92907	A	19920430	199645	
EP 592652	B1	19970917	EP 93911514	A	19930427	199742	
			WO 93ES34	A	19930427		
DE 69313967	E	19971023	DE 613967	A	19930427	199748	
			EP 93911514	A	19930427		
			WO 93ES34	A	19930427		

Priority Applications (No Type Date): ES 92907 A 19920430
Cited Patents: No-SR.Pub; 2.Jnl.Ref; EP 479605; GB 2187912; JP 3048233; JP
   62289083; US 4310849
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9322879	A2		44	H04N-013/00	

   Designated States (National): CA FI JP KP KR NO RU US
   Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL
   PT SE

EP 592652	A1	E		H04N-013/00	Based on patent WO 9322879

   Designated States (Regional): AT BE CH DE DK FR GB GR IE IT LI LU MC NL
   PT SE

JP 7500231	W		1	H04N-013/00	Based on patent WO 9322879
EP 592652	B1	E	22	H04N-013/00	Based on patent WO 9322879

   Designated States (Regional): AT BE CH DE DK FR GB GR IE IT LI LU MC NL
   PT SE

DE 69313967	E			H04N-013/00	Based on patent EP 592652
					Based on patent WO 9322879
ES 2043549	A2			G02B-027/22	
NO 9304815	A			H04N-000/00	
FI 9305949	A			H04N-000/00	

TW 224163   A   G0█-003/00
WO 9322879   A3   H04N-013/00
ES 2043549   B1   H04N-013/00

Abstract (Basic): WO 9322879 A
        The system projects an image onto a screen (16) of a headset, after
    recording the image in a range of 100 deg. vertically, 180 deg.
    horizontally and up to 360 deg. vertically and horizontally, in such a
    way as to allow **immersion** into the **image** and sound. These are
    decoded according to the position of a spectator w.r.t. the scene.
        The audiovisual appts. has a reception system, data processor, a
    screen, optical system (19), light obscurers (17, 18), sound system and
    a headset. Each spectator is individually connected to the appts..
    Images are seen on a screen through the optical system and light
    obscurers for the left eye (22) and right eye (21). Images are
    transmitted through a selector (20) to each eye and the images receives
    are combined in the spectators, field of view to give the appearance of
    three dimensions.
        USE - Projection of films of images and viewing or recording of
    virtual reality.
        Dwg.11/13
Title Terms: INTEGRAL; VIRTUAL; IMAGE; RECORD; PROJECT; AUDIOVISUAL;
    APPARATUS; ALTERNATE; IMAGE; LEFT; RIGHT; EYE; PROJECT; SCREEN; SENSE;
    ALLOW; IMAGE; SEARCH; OBTAIN; IMMERSE; EFFECT
Derwent Class: P81; W04
International Patent Class (Main): G02B-027/22; G02F-003/00; H04N-000/00;
    H04N-013/00
International Patent Class (Additional): G06F-015/62; G06F-015/66
File Segment: EPI; EngPI

11/5/13   (Item 1 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2000 JPO & JAPIO. All rts. reserv.

06481686   **Image available**
IMAGE SYNTHESIZER AND GAME DEVICE USING THE SAME

PUB. NO.:   20-00067263 [JP 2000067263 A]
PUBLISHED: March 03, 2000 (20000303)
INVENTOR(s):   SASAKI TAKEHITO
APPLICANT(s): NAMCO LTD
APPL. NO.:   11-227838 [JP 94227838]
FILED: June 10, 1994 (19940610)
PRIORITY: 05166495 [JP 94166495], JP (Japan), June 10, 1994 (19940610)
INTL CLASS: G06T-015/00; A63F-013/00; G06T-017/00; G06T-011/00

                          ABSTRACT
PROBLEM TO BE SOLVED: To provide an image synthesizer for displaying a
three-dimensional(3D) object with a few polygons and high resolution.

SOLUTION: This image synthesizer is provided with an object information
storage means 24 for storing the information of a 3D object as object
information expressed with the plural form modals of different accuracy,
means 22 and 24 for reading the object information, which is expressed with
the form model of high accuracy according to the reduction of a distance
between a **viewpoint** and the 3D object, out of the object information
storage means 24, arranging this information in a virtual 3D space and
projecting/transforming this 3D object to the projection **plane** of a
viewpoint coordinate system, a texture information storage means 32
formed so as to store the texture information of respective polygons
composing each form model corresponding to the form models of different
accuracy of the 3D object, and an image forming means 34 for forming a
display image by reading the texture information of the form model of
correspondent accuracy out of the **texture** information storage means and
mapping it to the polygons of the projected and transformed 3D object.

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DIALOG(R)File 347:JAPIO
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06444510   **Image available**
VIRTUAL REALITY SYSTEM

PUB. NO.:   20-00030080 [JP 2000030080 A]
PUBLISHED: January 28, 2000 (20000128)
INVENTOR(s):   SAWAI TAKESHI
APPLICANT(s): BASU PLUS ONE KK
APPL. NO.:   10-198767 [JP 98198767]
FILED: July 14, 1998 (19980714)
INTL CLASS: G06T-015/00

ABSTRACT

PROBLEM TO BE SOLVED: To provide a virtual reality system where an image
processing is drastically simplified by improving a method for displaying
images in a desired virtual space.

SOLUTION: The desired virtual space 10 is created based on computer
graphics, a **viewpoint** position is determined in the virtual space, a
hexahedron with the **viewpoint** position 11 as center is assumed. Images in
the directions of respective **surfaces** of the hexahedron are rendered as
materials for **texture**   **mapping** , the rendered images of a regular
hexahedron are displayed on the respective **surface** of the virtual regular
hexahedron by performing the **texture**   **mapping** to these **surfaces** .
Moreover, change or movement of the **viewpoint** position is enabled and the
displayed images are still images or moving images which are photographed
by a camera or a video camera.

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DIALOG(R)File 347:JAPIO
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06364781   **Image available**
IMAGE PROCESSOR, GAME DEVICE, IMAGE PROCESSING METHOD AND RECORDING MEDIUM

PUB. NO.:   11-306391 [JP 11306391 A]
PUBLISHED: November 05, 1999 (19991105)
INVENTOR(s):   HAGA NORIO
               FUKUHARA TOMOSATO
               SATO KAZUNOBU
APPLICANT(s): SEGA ENTERP LTD
APPL. NO.:   10-107423 [JP 98107423]
FILED: April 17, 1998 (19980417)
INTL CLASS: G06T-017/00; A63F-009/22; A63F-009/24; G06T-015/00

ABSTRACT
PROBLEM TO BE SOLVED: To surely display a locus band even though the
position of a **view** **point** is set to any position by setting a specific
line on an object and **mapping** and displaying prescribed **texture** to a
locus band that is made by a line as the object moves in virtual space.

SOLUTION: When it is decided that a locus band is shown on a ball, an
object specifying means 202 specifies an object on which the ball is shown
by referring to a shape data area 213 and calculates a specified point that
is a start point of the locus band. An endpoint calculating means 203
calculates endpoints of a segment line that passes the specified point
based on a specified point of the ball, the preceding positional data of
the ball which is stored an locus data area 215 and positional data of a
 view   **point**   stored in a **view**   **point** positional data area 216. A
 mapping   means 204 **maps**   **texture** data which is allocated for the locus

band on a **plane** made ●connecting the endpoints when ● endpoints are
calculated by the means 203.

 11/5/16   (Item 4 from file: 347)
DIALOG(R)File 347:JAPIO
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06154823   **Image available**
METHOD AND DEVICE FOR SYNTHESIZING FACIAL IMAGE OF PERSON WEARING HEAD
MOUNT DISPLAY

PUB. NO.:   11-096366 [JP 11096366 A]
PUBLISHED: April 09, 1999 (19990409)
INVENTOR(s): SHIWA SHINICHI
              KOBAYASHI MINORU
              KITAGAWA AIKO
              ICHIKAWA TADATSUGU
APPLICANT(s): NIPPON TELEGR & TELEPH CORP <NTT>
APPL. NO.:   09-254664 [JP 97254664]
FILED: September 19, 1997 (19970919)
INTL CLASS: G06T-007/00; G06T-001/00

ABSTRACT
PROBLEM TO BE SOLVED: To provide facial image synthesizing method and
device which obtains the facial image of a user who does not have a head
mount display when the head mount display is used as a displaying means in
an image communication system, etc.
SOLUTION: The front image (moving image) of a user is photographed over a
head mount display at the position of a camera 3 that is attached to the
head mount display. A facial area that is not covered with the head mount
display about the moving image is used as it is, and an image processing
means 6 performs processing that replaces a covered area with an area which
is segmented with a mask pattern of the head mount display from a still
image that is preliminarily photographed at the same **view   point** and is
accumulated in an accumulating means 5 when the head mount display is not
worn. A facial image that is synthesized from the moving image and the
still image is pasted on the **surface** of an appropriate solid body such as
a cube with a **texture   mapping** algorithm and it is outputted or
displayed as the head of a person.

 11/5/17   (Item 5 from file: 347)
DIALOG(R)File 347:JAPIO
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06124740   **Image available**
SIMPLE DISPLAY DEVICE FOR THREE-DIMENSIONAL TOPOGRAPHIC MODEL HAVING LARGE
NUMBER OF BODIES ARRANGED **SURFACE** AND ITS SIMPLE DISPLAY METHOD

PUB. NO.:   11-066277 [JP 11066277 A]
PUBLISHED: March 09, 1999 (19990309)
INVENTOR(s): HAMABE TORU
              NAKAMURA HIROYUKI
APPLICANT(s): NRI & NCC CO LTD
APPL. NO.:   09-221783 [JP 97221783]
FILED: August 18, 1997 (19970818)
INTL CLASS: G06T-001/00; G06T-017/00; G06F-017/50

ABSTRACT
PROBLEM TO BE SOLVED: To provide a simple display device and its simple
display method, which can display a three-dimensional topographic model
having a large number of bodies, arranged on its **surface** graphically and
stereoscopically with a small amount of data and a small load of

information processing.

SOLUTION: This device is equipped with an input means 2 which inputs three-dimensional topographic features as a three-dimensional model, a virtual **plane** setting means 3 which sets vertical virtual **surfaces** and horizontal virtual **surfaces** along contours of the three-dimensional topographic model, a **texture** **mapping** means 4 which **maps** the photographic image of the flank of a plant to the vertical virtual **surfaces** and a photographic image of the plant taken from above to the horizontal virtual **surfaces** , and a display means 6 which displays an image viewed from the position of a movable **viewpoint** .

11/5/18   (Item 6 from file: 347)

05894562   **Image available**
THREE-DIMENSIONAL GAME DEVICE AND INFORMATION STORING MEDIUM

PUB. NO.:   10-177662 [JP 10177662 A]
PUBLISHED: June 30, 1998 (19980630)
INVENTOR(s):   MATSUDA SHIZUKA
APPLICANT(s):   NAMCO LTD [472204] (A Japanese Company or Corporation), JP
                (Japan)
APPL. NO.:   09-290465 [JP 97290465]
FILED: October 07, 1997 (19971007)
INTL CLASS: [6] G06T-017/00; A63F-009/22; G06T-015/00
JAPIO CLASS: 45.9 (INFORMATION PROCESSING -- Other); 30.2 (MISCELLANEOUS
                GOODS -- Sports & Recreation)
JAPIO KEYWORD:R102 (APPLIED ELECTRONICS -- Video Disk Recorders, VDR); R131
                (INFORMATION PROCESSING -- Microcomputers & Microprocessers);
                R138 (APPLIED ELECTRONICS -- Vertical Magnetic &
                Photomagnetic Recording)

                              ABSTRACT
PROBLEM TO BE SOLVED: To provide a three-dimensional game device and an information storing medium in which background pictures such as a ground level and a water level with high quality can be synthesized by a small number of polygons.

SOLUTION: A long side is set in a horizontal scanning direction, the texture coordinate of each vertex of a rectangular polygon having height for one horizontal scanning segment is calculated, and visual field pictures including a picture in which plural rectangular polygons whose **texture** is **mapping** -processed based on this **texture** coordinate are arranged in a vertical scanning direction are composed. A virtual **view point** 30 and a virtual screen 32 for specifying a position relation with a texture **plane** 34 according to the position and direction of a **view point** and a visual line are set, each vertex of virtual rectangular polygons 36-0-36-239 arranged on the virtual screen 32 is projected to the texture **plane** 34 with the virtual **view point** 30 as a center of projection, and the texture coordinate of the projecting point is used as the texture coordinate of each vertex of the rectangular polygon. A distance (h) is changed for each rectangular polygon and each frame, and the wave of a water level is expressed.

11/5/19   (Item 7 from file: 347)

05705091   **Image available**
IMAGE PROCESSOR AND ITS PROCESSING METHOD

PUB. NO.:   09-319891 [JP 9319891 A]

ABSTRACT
PROBLEM TO BE SOLVED: To vary an image projected on the reflecting **surface**
 of an object in real time by generating image data to be projected on the
reflecting **surface** according to **viewpoint** information corresponding to
the reflecting **surface** and generating image data for a display screen
according to **viewpoint** information corresponding to a display image.

SOLUTION: An object of a house 103 is projected onto the reflecting
 surface 104 of an object 100 of a building. The **viewpoint** 40, when a
reflection map is drawn, is symmetrical with the visual point 30 as to the
display screen with respect to the reflecting **surface** 104. On the basis
of the **viewpoint** 40 and reflection lines 35 and 36, polygons of objects
present in the visual field are processed, and data on a projected image
are written to the reflection map. Then while the reflection **map** used
similarly to an ordinary **texture**   map is drawn (written) to a frame
buffer according to the visual point 30.

 11/5/20   (Item 8 from file: 347)
DIALOG(R)File 347:JAPIO
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04989692   **Image available**
 TEXTURE   MAPPING METHOD AND IMAGE PROCESSOR

ABSTRACT
PURPOSE: To obtain the system and device which greatly decreases an
arithmetic quantity and prevents texture deformation that is caused before.

CONSTITUTION: For   the   **texture**   **mapping**   of a polygon in a
three-dimensional space, the value of depth information Z is virtually
given to all the pieces of vertex information in two-dimensional texture
coordinates to form a **plane** in the three-dimensional space and arrange it
virtually in a polygon space (**view**   **point** coordinates); and liner
transformation between vertexes of texture data corresponding to the
respective vertexes of the polygon is performed and coordinate
transformation processing is performed so that respective size coordinate
values becomes equal. Then linear mapping is performed for respective
pixels on the polygon by utilizing the coefficient and depth value Z of the
linear transformation and inverse transformation for finding the coordinate
values of the corresponding texture data is performed.

 11/5/21   (Item 9 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2000 JPO & JAPIO. All rts. reserv.

04772593   **Image available**
TEXTURE SIMULATION DEVICE

PUB. NO.:   07-065193   [JP 7065193 A]
PUBLISHED: March 10, 1995 (19950310)
INVENTOR(s):   TOMITA YUTAKA
               EINAMI JIROU
APPLICANT(s): TOPPAN PRINTING CO LTD [000319] (A Japanese Company or
               Corporation), JP (Japan)
APPL. NO.:   05-209761   [JP 93209761]
FILED: August 24, 1993 (19930824)
INTL CLASS: [6] G06T-015/00
JAPIO CLASS: 45.9 (INFORMATION PROCESSING -- Other)
JAPIO KEYWORD:R060 (MACHINERY -- Automatic Design)

ABSTRACT
PURPOSE: To repaste texture image data with high efficiency.

CONSTITUTION: This device is equipped with a data input means 2 for
inputting three-dimensional data S(sub 1) on a body, light source
information S(sub 3), and **view point** information S(sub 4), an image
generating means 9 which generates a three- dimensional image, luminance
data S(sub 2), and ray tracing data S(sub 5) from those data S(sub 1),
S(sub 3), and S(sub 4), data generating means 10 and 11, a 1st storage
means 12 which stores those data, a 2nd storage means 15 which stores a
texture image S(sub 6), a **texture** image **mapping** means 17 which **maps**
the **texture** image S(sub 6) selected from the 2nd storage means 15 into a
three-dimensional image, and an image pasting means 20 which composes the
mapped texture image S(sub 6) and the stored luminance data S(sub 2)
and ray tracing data S(sub 5) together and pastes them on a **plane**
specified by a **plane** specifying means 18; and the generation time of the
three-dimensional image is shortened by omitting the calculation of the
luminance data S(sub 2) and ray tracing data S(sub 5) at the time of
texture image pasting.

11/5/22   (Item 10 from file: 347)
DIALOG(R)File 347:JAPIO
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04676960   **Image available**
PICTURE SYNTHESIZING DEVICE AND GAME DEVICE USING THE SAME

PUB. NO.:   06-348860   [JP 6348860 A]
PUBLISHED: December 22, 1994 (19941222)
INVENTOR(s):   TSUCHIDA MASAAKI
               SASAKI TAKEHITO
APPLICANT(s): NAMCO LTD [472204] (A Japanese Company or Corporation), JP
               (Japan)
APPL. NO.:   05-166494   [JP 93166494]
FILED: June 10, 1993 (19930610)
INTL CLASS: [5] G06F-015/72; A63F-009/22
JAPIO CLASS: 45.4 (INFORMATION PROCESSING -- Computer Applications); 30.2
               (MISCELLANEOUS GOODS -- Sports & Recreation)

ABSTRACT
PURPOSE: To provide a real time display type picture synthesizing device in
which the **surface** with projecting and recessing parts of a
three-dimensional object can be simplified and expressed by the combination
of a few polygons, and the picture of a high picture quality with a
stereoscopic sensation can be synthesized.

CONSTITUTION: In a real time display type picture synthesizing device, a
three- dimensional object expressed by combining the polygons in a vertual
three-dimensional space is transformed in perspective projection on the
projcting **surface** of a **view point** coordinate system, and a display
picture is synthesized. This device is equipped with a texture information

storage means 42 which preliminarily stores the picture of each polygon obtained when the three-dimensional object is viewed from a prescribed angle in an oblique direction as texture information. Then, a picture forming part 44 operates the **mapping** of the corresponding **texture** information stored in the texture information storage means 42, forms the display picture, and displays it on a display 46 for the polygon of the three-dimensional object. Thus, the picture obtained when the three-dimensional object is viewed from the oblique direction can be expressed by a few polygons.

11/5/23   (Item 11 from file: 347)
DIALOG(R)File 347:JAPIO
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04495468   **Image available**
EARTH **SURFACE** DISPLAY SYSTEM

PUB. NO.:   06-139368 [JP 6139368 A]
PUBLISHED: May 20, 1994 (19940520)
INVENTOR(s):   HAGIWARA TOSHIYUKI
                 KAMEYAMA MASATOSHI
                 HIGO MOKICHI   .
APPLICANT(s):   MITSUBISHI ELECTRIC CORP [000601] (A Japanese Company or
                 Corporation), JP (Japan)
APPL. NO.:   04-287907 [JP 92287907]
FILED: October 26, 1992 (19921026)
INTL CLASS: [5] G06F-015/72; G06F-015/62
JAPIO CLASS: 45.4 (INFORMATION PROCESSING -- Computer Applications)
JOURNAL: Section: P, Section No. 1789, Vol. 18, No. 445, Pg. 27,
                 August 18, 1994 (19940818)

ABSTRACT
PURPOSE: To prevent the increase of the processing time for the image generation in accordance with the increase of the number of vertex due to the extension of a topographical range to be displayed and to prevent the degradation of image quality due to the decrease of the number of vertex by thinning vertexes, in an earth **surface** display system displaying a topography three- dimensionally.

CONSTITUTION: From **viewpoint** information on a **viewpoint** location, a remark **viewpoint** location, an angle of visibility, etc., which are necessary for the generation of a three-dimensional image inputted by an information input part 11, a topographical area to be a display object is determined by a display area analysis part 12, the thinning number of vertex and a display system are decided by a display system decision part 13 from the number of vertex of the topographical model data contained in the topographical area, and a three-dimensional topographical image is generated by a glow shading processing part 14 or a **texture** **mapping** processing part 15 in accordance with the determination.

11/5/24   (Item 12 from file: 347)
DIALOG(R)File 347:JAPIO
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04311923   **Image available**
METHOD FOR GENERATING SIMULATED VISIBILITY

PUB. NO.:   05-303623 [JP 5303623 A]
PUBLISHED: November 16, 1993 (19931116)
INVENTOR(s):   ENOMOTO YASUHIRO
APPLICANT(s):   MITSUBISHI PRECISION CO LTD [401657] (A Japanese Company or
                 Corporation), JP (Japan)
APPL. NO.:   04-129829 [JP 92129829]
FILED: April 24, 1992 (19920424)
INTL CLASS: [5] G06F-015/62; G06F-015/72
JAPIO CLASS: 45.4 (INFORMATION PROCESSING -- Computer Applications)

ABSTRACT

PURPOSE: To make a mapping of brightness which changes frame by frame on
the topography and to make a simulation of illumination by **applying** the
texture stored in a pattern memory on the light **plane** moving with the
view **point** .
CONSTITUTION: A light **plane** 13 is a virtual one corresponding to a memory
holding the shape and brightness of the illumination from a light source
12, which is not in the space of the earth coordinates in the database but
kept in a brightness pattern 14 formed by the circular illumination. The
direction and location of the light **plane** 13.is defined by a light vector
L which coincides with the perpendicular down from a **view** **point** 11 to
the light **plane** 13 and which is directed to illuminate the light source
12. The distance L from the original 130 of the light **plane** 13 to the
view **point** 11 is kept constant and the direction moves with the **view**
point 11 to be changed individually. A pilot sees the two-dimensional
picture of the scene on the earth coordinates through a screen 15 from the
view **point** 1.

DIALOG(R)File 350:Derwent WPIX

012672147   **Image available**
WPI Acc No: 1999-478254/199940
XRPX Acc No: N99-355988
Line data generating system for performing perspective transformation of visible stimuli
Patent Assignee: OXAAL F (OXAA-I)
Inventor: **OXAAL F**
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5936630	A	19990810	US 92990250	A	19921214	199940	B
			US 95478839	A	19950607		
			US 97813873	A	19970307		

Priority Applications (No Type Date): US 92990250 A 19921214; US 95478839 A 19950607; US 97813873 A 19970307
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5936630	A		19	G06T-015/20	Cont of application US 92990250
					Cont of application US 95478839
					Cont of patent US 5684937

Abstract (Basic): US 5936630 A
    NOVELTY - Line data corresponding to initial curve data on an initial line is received from memory (60) and based on this arc length and angular rotation of initial curve data are adjusted with respect to end points of initial line and with respect to line angular rotation of initial line. An image processor (10) displays the adjusted initial curve data on display (20).
    DETAILED DESCRIPTION - Line data and curve data in corresponding co-ordinate system are stored in memory (60). An INDEPENDENT CLAIM is also included for a line data generating method for performing the transformation of visible stimuli.
    USE - In video game machine, calculator, motion pictures, television productions, theme park attractions, aircraft, etc.
    ADVANTAGE - As the objects can be easily produced while maintaining visual similarity to their original shapes, the peripheral vision of view can be increased. Higher concentration of visually palpable information can be provided for a viewer as the objects are displayed without deteriorating the integrity of the object.
    DESCRIPTION OF DRAWING(S) - The figure shows the on-line data generating apparatus.
    Image processor (10)
    Display (20)
    Memory (60)
    pp; 19 DwgNo 5/8
Title Terms: LINE; DATA; GENERATE; SYSTEM; PERFORMANCE; PERSPECTIVE; TRANSFORM; VISIBLE; STIMULUS
Derwent Class: T01
International Patent Class (Main): G06T-015/20
File Segment: EPI

DIALOG(R)File 350:Derwent WPIX

012506252   **Image available**
WPI Acc No: 1999-312357/199926
XRPX Acc No: N99-233291
Three hundred and sixty degree spherical visual data set producing method using cameras
Patent Assignee: OXAAL F (OXAA-I)
Inventor: **OXAAL F**

Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5903782	A	19990511	US 956800	A	19951115	199926	B
			US 96749166	A	19961114		

Priority Applications (No Type Date): US 956800 A 19951115; US 96749166 A
   19961114
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5903782	A		9	G03B-029/00	Provisional application US 956800

Abstract (Basic): US 5903782 A
       NOVELTY - The vertical axis plumb is aligned in predefined manner
   with respect to reference plane. A lens (2) is aligned such that the
   reference plane corresponds to plane of interest and a light source is
   fixed after which shooting is carried out using a camera (1). The lens
   is pivoted 180 degrees about the vertical axis and the procedure is
   repeated.
       DETAILED DESCRIPTION - The field of view is represented by a
   hemisphere having a base which defines at least half space. The
   vertical axis passes through the center of reference plane. The
   reference plane coincides with base of hemisphere and the center with
   origin. The camera is supported by a monopod (3).
       USE - For producing 360 degrees special visual data set to
   facilitate production of computer generated images.
       ADVANTAGE - Digital camera may be employed avoiding the necessity
   of converting analog based picture into digital format to facilitate
   production of computer generated images using software algorithms.
       DESCRIPTION OF DRAWING(S) - The figure shows a camera mounted on a
   monopod.
       Camera (1)
       Lens (2)
       Monopod (3)
       pp; 9 DwgNo 2/5
Title Terms: THREE; HUNDRED; SIXTY; DEGREE; SPHERE; VISUAL; DATA; SET;
   PRODUCE; METHOD; CAMERA
Derwent Class: P82; S06
International Patent Class (Main): G03B-029/00
File Segment: EPI; EngPI

 17/5/3   (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2000 Derwent Info Ltd. All rts. reserv.

011572799   **Image available**
WPI Acc No: 1997-549280/199750
XRPX Acc No: N97-458053
 Method of perspective transformation of input to resultant visible
 stimuli for perspective generation system e.g flight simulator - involves
 differentiating number of rays vn by identifying number of corresponding
 points as set of first points in visible space, each of rays is specified
 with respect to reference half plane
Patent Assignee: OXAAL F (OXAA-I)
Inventor: **OXAAL F**
Number of Countries: 001 Number of Patents: Q01
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5684937	A	19971104	US 92990250	A	19921214	199750	B
			US 95478839	A	19950607		

Priority Applications (No Type Date): US 92990250 A 19921214; US 95478839 A
   19950607
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5684937	A		18	G06T-015/20	Cont of application US 92990250

Abstract (Basic): US 568●●7 A

The method involves differentiating a number of rays vn by identifying a number of corresponding points as a set of first points in a visible space, each of the rays is specified with respect to a reference half plane. A viewpoint is disposed on one edge of the half plane and with a direction of vision function of the user coincident with one edge, a first angle theta denotes angular displacement between the half plane and a second half plane coincident with a respective one of ray vn.

A second angle psi denotes angular displacement between the direction of vision function and the respective one of the rays vn. Each respective second angle psi is scaled by a predetermined constant k to produce a respective scaled second angle psi . A set of second points is generated respectively corresponding to each of the first points based on the scaled second angles psi produced. The second points is projected on a display device to produce the output visible image. The output visible image corresponds to the second visual stimuli and having visual similarity to the first visual stimuli.

ADVANTAGE - Maintains visual similarity with input visible stimuli.

Dwg.2a/8

Title Terms: METHOD; PERSPECTIVE; TRANSFORM; INPUT; RESULT; VISIBLE; STIMULUS; PERSPECTIVE; GENERATE; SYSTEM; FLIGHT; SIMULATE; DIFFERENTIAL; NUMBER; RAY; IDENTIFY; NUMBER; CORRESPOND; POINT; SET; FIRST; POINT; VISIBLE; SPACE; RAY; SPECIFIED; RESPECT; REFERENCE; HALF; PLANE
Derwent Class: T01
International Patent Class (Main): G06T-015/20
File Segment: EPI

DIALOG(R)File 350:Derwent WPIX

009108815   **Image available**
WPI Acc No: 1992-236246/199229
Related WPI Acc No: 1992-236243; 1992-236244; 1992-236245; 1992-236247;
  1992-243952; 1992-268856
XRPX Acc No: N92-179876
 **Programmable computer graphics system – allows user to manipulate complex
 graphics object using Stencil, Translator, Clipper and pixel attribute
 modification commands**
Patent Assignee: DU PONT PIXEL SYSTEMS LTD (DUPO   ); 3DLABS LTD (THRE-N)
Inventor: MACNAUGHTON I S; NEAVE J W; SALKILD J D; TREVETT N F; SALKILD D J
Number of Countries: 002 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
GB 2251772	A	19920715	GB 91360	A	19910109	199229	B
GB 2251772	B	19940810	GB 91360	A	19910109	199429	
US 5774133	A	19980630	US 9388725	A	19930707	199833	

Priority Applications (No Type Date): GB 91360 A 19910109; GB 91357 A
 19910109; GB 91358 A 19910109; GB 91359 A 19910109; GB 91361 A 19910109;
  GB 91362 A 19910109
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
GB 2251772	A		190	G06F-015/72	
GB 2251772	B		3	G06F-015/72	
US 5774133	A			G06F-015/80	

Abstract (Basic): GB 2251772 A
      The Stencil commands set the **envelope** set of pixels, within the
      total defined **image** space, which may be operated on. The Translator
      commands replicate and extend the envelope set defined by a Stencil
      command.
      The Clipper commands select or deselect pixels of the envelope
      set, in parallel, for pixel-attribute operations. From the programmer's
      point of **view** , at least one of the registers is allowed to have an
      infinite (undefined) width, i.e. as wide as needed to accommodate all
      pixels of the objects being manipulated. None of pixel-attribute
      medication commands requires any count or list of number of pixels to
      be modified as a command agreement.
      ADVANTAGE – Has high performance graphics and imaging capabilities
Title Terms: PROGRAM; COMPUTER; GRAPHIC; SYSTEM; ALLOW; USER; MANIPULATE;
  COMPLEX; GRAPHIC; OBJECT; STENCIL; TRANSLATION; CLIP; PIXEL; ATTRIBUTE;
  MODIFIED; COMMAND
Derwent Class: T01; W04
International Patent Class (Main): G06F-015/72; G06F-015/80
File Segment: EPI

DIALOG(R)File 350:Derwent WPIX

008592206   **Image available**
WPI Acc No: 1991-096238/199114
XRAM Acc No: C91-041141
XRPX Acc No: N91-074399
 **Prism of transparent material presenting reflective subsurface image –
 with surface features to induce remote** enveloping   images
Patent Assignee: BALLESTEROS J M L (BALL-I)
Inventor: BALLESTERO F L; BALLESTERO J M L
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
FR 2650785	A	19910215	FR 8910894	A	19890809	199114	B

Abstract (Basic): FR 2650785 A
        Decorative sculptures comprise prismatic bodies of transparent
    material which present a flat face (7) and have a recess in the
    vertical edge (3) behind the plane face in which the recess is a
    segment of a regular body such as another prism, a hot air balloon or a
    quarter or half of a regular structure such as a model building.
    Internal reflections viewed via the plane face result in the impression
    (9) of a solid body with a perspective which changes relative to the
    point of **view** . Features such as seabirds (8) or clouds etched or
    embossed in the plane (7) are flanking (5,6) faces of the prism, also
    appear to surround the reflective image and shift relative to it as the
    viewpoint changes from laterally or vertically. The prism may be made
    of polymethyl methacrylate, polycarbonate, glass or crystal. The recess
    to the rear may be provided by thermoforming or by hot tool engraving.
    Pref. the prism is mounted on a plinth. The top and bottom faces of the
    prism may be shaped and/or coated.
        USE - For decorative, display or souvenir purpose, simple and
    robust provision of a deep three dimensional effect. (26pp Dwg.No.23/24
Title Terms: PRISM; TRANSPARENT; MATERIAL; PRESENT; REFLECT; SUBSURFACE;
   IMAGE; SURFACE; FEATURE; INDUCE; REMOTE; ENVELOP; IMAGE
Derwent Class: A14; A86; P78; P81
International Patent Class (Additional): B44C-005/00; G02B-027/02
File Segment: CPI; EngPI

 20/5/3   (Item 1 from file: 347)
DIALOG(R)File 347:JAPIO
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04004269   **Image available**
MIXTURE REFRIGERANT PHASE-BALANCE DISPLAY

PUB. NO.:   04-369369 [JP 4369369 A]
PUBLISHED: December 22, 1992 (19921222)
INVENTOR(s):   YOSHIDA YUJI
                FUNAKURA SHOZO
                KODAMA HISASHI
                ARITA KOJI
APPLICANT(s):   MATSUSHITA ELECTRIC IND CO LTD [000582] (A Japanese Company
                or Corporation), JP (Japan)
APPL. NO.:   03-142945 [JP 91142945]
FILED: June 14, 1991 (19910614)
INTL CLASS: [5] F25B-049/02
JAPIO CLASS: 24.2 (CHEMICAL ENGINEERING -- Heating & Cooling)
JOURNAL: Section: M, Section No. 1411, Vol. 17, No. 248, Pg. 133, May
                18, 1993 (19930518)

ABSTRACT
PURPOSE: To facilitate search of replacing refrigerant and specification of
mixture composition by a method wherein phase-balance of three component
system mixture refrigerant is calculated and the phase-balance of three
components is displayed cubically so that changes of temperature and
pressure corresponding to each component are known visibly.

CONSTITUTION: An input part 1 into which calculation conditions are
inputted, a solver part 2 to calculate gas-liquid balance relationship by
characteristic predication, a data filing part 3 to store calculation
results a data extraction part 4 to extract a part of or all data, a
coordinates changing part 6 to change to triangle-pole coordinates or
triangle coordinates, and a smoothing part 5 to interpolate, if needed,
values between the calculation results are provided. A plotting part 7
plots on an indicated triangle-pole coordinates or triangle coordinates, a
curve generating part 8 generates **enveloped** curved surfaces and lines,
and a dynamic **image** generating part 9 makes rotations and movements of
 view   **point** , so that a display can be observed cubically from many
angles.

20/5/4   (Item 2 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2000 JPO & JAPIO. All rts. reserv.

02432579   **Image available**
THERMAL RECORDING MATERIAL

ABSTRACT

PURPOSE: To obtain a thermal recording material having excellent recording
properties   such   as   color   forming   properties   and   being   favorable   in
stability of images, by using a specified zinc complex as a color developer
and   jointly   using   at   least one specified ether compound as an auxiliary
component.

CONSTITUTION: A   zinc   complex   of   general   formula   (I),   wherein R is an
organic ligand capable of combining with zinc ion through a hetero-atom to
form a complex, k is 2 or 4, and X is SCN or a halogen, is used as a color
developer, and at least one ether compound of general formula (II), wherein
R is a hydrocarbon group having at least one double bond, each of X and Y,
which may be the same or different, is a lower alkyl, alkoxyl, aryl,
aralkyl,   acyloxyl   or   halogen,   and   each of m and n is independently an
integer of 0-3, is jointly used as an auxiliary component, in a thermal
recording   material   in   which   a   thermal color forming layer comprising a
leuco dye and a color developer is provided on a base. The zinc complex and
the ether compound to be used are preferably those having a melting point
of 40-150 deg.C, from the **viewpoints** of preservation stability and
sensitivity of the thermal recording material. With this arrangement, a
thermal recording material can be obtained which has sufficient developed
color density and color forming sensitivity, is suitable for high-speed
recording,   has   high   ground   brightness, is free of development of ground
color or decoloration of developed color part even upon contact with oils,
plasticizers or the like, and is free of lowering of **image** density even
upon contact with water, such as **immersion** in water.

Integral virtual reality, image recording and projection audiovisual appts. - has alternating images for left and right eye projected onto screen with sensors to allow image search to obtain immersion effect

Set	Items	Description
S1	696	P()(SURFACE? OR SPHERE? OR PLANE? ?) OR PSURFACE? OR PSPHE-RE?
S2	47241	VIEWPOINT? OR VIEW(1N)POINT? ? OR DIRECTION(1W)VIEW? ?
S3	1379	(TEXTURE? OR TEXEL?)(5N)(MAP? ? OR MAPP? OR APPLICATION? OR APPLY?)
S4	1115	((FULL? ? OR COMPLETE? OR TOTAL? OR ENTIRE?)(2N)SURROUND? - OR WRAP?()AROUND OR IMMERS????)(5N)(SCENE? ? OR IMAGE? OR DATA OR PICTURE? ? OR GRAPHIC? ?)
S5	73	SAMPL?(5N)(VISIBLE OR VIRTUAL OR DIGITAL)(3N)(WORLD? OR SP-ACE OR ENVIRON?)
S6	1	S1(S)S2(S)S3(S)(S4 OR S5)
S7	1	S2(S)S3(S)(S4 OR S5)
S8	0	S7 NOT S6
S9	100	S2(S)(S3 OR S4 OR S5)
S10	661643	SURFACE? OR PLANE OR PLANES OR SPHERE?
S11	48	S9(S)S10
S12	13	S10(5N)S2(S)(S3 OR S4 OR S5)
S13	3	S1(S)(S3 OR S4 OR S5)
S14	2	S13 NOT (S6 OR S12)
S15	0	AU=OXAAL F?

DIALOG(R)File 349:PCT Fulltext

00717132
ADVANCED DEFERRED SHADING GRAPHICS PIPELINE PROCESSOR
PROCESSEUR PIPELINE GRAPHIQUE EVOLUE A OMBRAGE DIFFERE
Patent Applicant/Assignee:
  APPLE COMPUTER INC, APPLE COMPUTER, INC. , 1 Infinite Loop, Cupertino, CA
    95014-2084 , US
Inventor(s):
  DULUK Jerome F Jr, DULUK, Jerome, F., Jr. , 950 North California Drive,
    Palo Alto, CA 94303 , US
  HESSEL Richard E, HESSEL, Richard, E. , 3225 Flemington Court,
    Pleasanton, CA 94588 , US
  ARNOLD Vaughn T, ARNOLD, Vaughn, T. , 621 Canepa Drive, Scotts Valley, CA
    95066 , US
  BENKUAL Jack, BENKUAL, Jack , 11661 Timber Spring Court, Cupertino, CA
    95014 , US
  BRATT Joseph P, BRATT, Joseph, P. , 1045 Oaktree Drive, San Jose, CA
    95129 , US
  CUAN George, CUAN, George , 798 Lusterleaf Drive, Sunnyvale, CA 94086 ,
    US
  DODGEN Steven L, DODGEN, Steven, L. , 15735 Forest Hill Drive, Boulder
    Creek, CA 95006 , US
  FANG Emerson S, FANG, Emerson, S. , 1197 Wisteria Drive, Fremont, CA
    94539 , US
  GONG Zhaoyu G, GONG, Zhaoyu, G. , 1342 S. Stelling Road, Cupertino, CA
    95014 , US
  HO Thomas Y, HO, Thomas, Y. , 40732 Ondina Place, Fremont, CA 94539 , US
  HSU Hengwei, HSU, Hengwei , 4209 Canfield Drive, Fremont, CA 94536 , US
  LI Sidong, LI, Sidong , 5598 LeFevre Drive, San Jose, CA 95118 , US
  NG Sam, NG, Sam , 34377 Maybird Circle, Fremont, CA 94555 , US
  PAPAKIPOS Matthew N, PAPAKIPOS, Matthew, N. , 1701 Oak Avenue, Menlo
    Park, CA 94025 , US
  REDGRAVE Jason R, REDGRAVE, Jason, R. , 278 Martens Avenue, Mountain
    View, CA 95040 , US
  TRIVEDI Sushma S, TRIVEDI, Sushma, S. , 1208 Rembrandt Drive, Sunnyvale,
    CA 94087 , US
  TUCK Nathan D, TUCK, Nathan, D. , 8666 Somerset Avenue, San Diego, CA
    92123 , US
  GO Shun Wai, GO, Shun, Wai , 370 Sandhurst Drive, Milpitas, CA 95035 , US
  FUNG Lindy, FUNG, Lindy , 358 Pescadero Terrace, Sunnyvale, Ca 94086 , US
  NGUYEN Tuan D, NGUYEN, Tuan, D. , 5327 Birch Grove Drive, San Jose, CA
    95123 , US
  GRASS Joseph P, GRASS, Joseph, P. , 357 Lennox Avenue, Menlo Park, CA
    94025 , US
  HONG Bor-Shyue, HONG, Bor-Shyue , 2325 Oak Flat Road, San Jose, CA 95131
    , US
  MAMMEN Abraham, MAMMEN, Abraham , 2780 Lylewood Drive, Pleasanton, CA
    94588 , US
  RASHID Abbas, RASHID, Abbas , 34369 Eucalyptus Terrace, Fremont, CA
    94555-1982 , US
  TSAY Albert Suan-Wei, TSAY, Albert, Suan-Wei , 38129 Cambridge Court,
    Fremont, CA 94536 , US
Patent and Priority Information (Country, Number, Date):
  Patent: WO 0030040 A1 20000525 (WO 200030040)
  Application: WO 99US18971 19990820 (PCT/WO US9918971)
  Priority Application: US 9897336 19980820; US 98213990 19981217
Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE
  ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT
  LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT
  UA UG UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ UG ZW AM AZ BY KG KZ MD RU
  TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG
  CI CM GA GN GW ML MR NE SN TD TG
Main International Patent Class: G06T-015/00;
International Patent Class: G06T-017/00; G06T-011/40; G06T-011/00;

English Abstract
  A graphics pipeline processor that extracts (4000), sorts (6000) and
  renders pixel fragments. The processor applies texture (12000) and one of
  various fragment operations (11000).

French Abstract
  L'invention concerne un processeur pipeline graphique qui extrait (4000),
  trie (6000) et restitue des fragments de pixels. Ce processeur applique
  une texture (12000) et realise une operation sur fragments parmi une
  pluralite d'operations sur les fragments (11000).

Detailed Description
...   3-Dimensional animation is achieved by displaying a sequence of
  images. Interactive 3-Dimensional (3D) computer graphics allows a user to
  change his or her **viewpoint** or to change the geometry in real time,
  thereby requiring the rendering system to create new images on-the-fly in
  real-time. Therefore, real...screen buffer that is displayed on the
  monitor by scanning-out the pixel colors at refresh rate. It also holds
  off-screen overlay and buffers (**p** -buffers), display lists and vertex
  arrays, and accumulation buffers. The screen buffer and the 3D p-buffers
  can be dual buffered. In one embodiment, FRM...
?

01045320
Imaging processing apparatus
Bilderzeugungsgerat
Appareil de creation d'image
PATENT ASSIGNEE:
   SHIMA SEIKI MANUFACTURING, LTD., (1257392), 85, Sakata, Wakayama 641-8511
   , (JP), (applicant designated states:
   AT;BE;CH;CY;DE;DK;ES;FI;FR;GB;GR;IE;IT;LI;LU;MC;NL;PT;SE)
INVENTOR:
   Nagashima, Hiroshi, 3-1-3 Takasho-machi, Wakayama, (JP)
LEGAL REPRESENTATIVE:
   Jackson, Robert Patrick (80311), Frank B. Dehn & Co., European Patent
      Attorneys, 179 Queen Victoria Street, London EC4V 4EL, (GB)
PATENT (CC, No, Kind, Date): EP 924642 A2 990623 (Basic)
APPLICATION (CC, No, Date):   EP 98310599 981222;
PRIORITY (CC, No, Date): JP 36579797 971222
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
   LU; MC; NL; PT; SE
INTERNATIONAL PATENT CLASS: G06T-001/20;

ABSTRACT EP 924642 A2
   A bump image for a three-dimensional model of an object is stored and
   modified as well as a texture image in a rendering stage. A reverse
   mapping address to the texture image and the bump image is stored in a
   rendering memory to obtain a drawing object address for the texture image
   according to the address in the rendering memory.
ABSTRACT WORD COUNT: 61

LEGAL STATUS (Type, Pub Date, Kind, Text):
 Application: 990623 A2 Published application (A1with Search Report
                          ;A2without Search Report)
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9925	253
SPEC A	(English)	9925	3648
Total word count - document A			3901
Total word count - document B			0
Total word count - documents A + B			3901

...SPECIFICATION and stores the impearmeability of each pixel (alpha) in 8
   bit length for example. In the Z data layer 61, the Z value specifies the
   surface position for the **viewpoint** in 32 bit length for example. That
   is, the smaller the Z value is, the closer to the viewpoint, and the
   larger the Z value is, the farther to the viewpoint. The reverse mapping
   address layer 62 stores the reverse mapping address M' for the reverse
   mapping of each pixel to the **texture** image and the bump image in 32
   bit length for example. 64 is a display area in the rendering image, and
   the image in the...

01043210
**METHOD AND SYSTEM FOR MULTIPLEXING IMAGE SIGNAL, METHOD AND SYSTEM FOR
   DEMULTIPLEXING IMAGE SIGNAL, AND TRANSMISSION MEDIUM**
**VERFAHREN UND VORRICHTUNG ZUR MULTIPLEXIERUNG UND DEMULTIPLEXIERUNG VON
   BILDSIGNALEN SOWIE UBERTRAGUNGSMEDIUM**
**PROCEDE ET SYSTEME DE MULTIPLEXAGE D'UN SIGNAL IMAGE, PROCEDE ET SYSTEME DE
   DEMULTIPLEXAGE D'UN SIGNAL IMAGE, ET SUPPORT DE TRANSMISSION**
PATENT ASSIGNEE:
   Sony Corporation, (214028), 7-35, Kitashinagawa 6-chome, Shinagawa-ku,

Tokyo 141-0001, (JP), applicant designated states:
    AT;BE;CH;DE;ES;FI;FR;GB;IT;LI;NL)
INVENTOR:
  SUZUKI, Teruhiko, Sony Corporation, 7-35, Kitashinagawa 6-chome,
    Shinagawa-ku, Tokyo 141-0001, (JP)
  YAGASAKI, Yoichi, Sony Corporation, 7-35, Kitashinagawa 6-chome,
    Shinagawa-ku, Tokyo 141-0001, (JP)
LEGAL REPRESENTATIVE:
  Melzer, Wolfgang, Dipl.-Ing. et al (8278), Patentanwalte Mitscherlich &
    Partner, Sonnenstrasse 33, 80331 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 933939 A1 990804 (Basic)
                              WO 9904566 990128
APPLICATION (CC, No, Date):   EP 98932580 980717; WO 98JP3235 980717
PRIORITY (CC, No, Date): JP 19364197 970718
DESIGNATED STATES: AT; BE; CH; DE; ES; FI; FR; GB; IT; LI; NL
INTERNATIONAL PATENT CLASS: H04N-007/08;
CITED PATENTS (WO A): JP 10004539 A
CITED REFERENCES (WO A):
  MINORU EITO, "Trend of MPEG4 Moving Picture Coding Standization (in
    Japanese)", TECHNICAL REPORT OF IEICE, Vol. 95, No. 469, 1996, (Tokyo),
    p. 55-60.
  TOSHIO MIKI, TOSHIRO KAWAHARA, TOMOYUKI OYA, SANAE HOYA, "Trend in
    Standardization of MPEG4 (in Japanese)", TECHNICAL REPORT OF IEICE,
    Vol. 95, No. 539, 1996, (Tokyo), p. 43-48.
  MINORU EITO, "Trend in Standardization of MPEG4 (in Japanese)", THE
    JOURNAL OF THE INSTITUTE OF IMAGE ELECTRONICS ENGINEERS OF JAPAN, Vol.
    25, No. 3, 1996, (Tokyo), p. 223-228.
  KOTARO ASAI, "MPEG4 Video verification Model (in Japanese)", PREPRINTS OF
    1996 WINTER MEETING OF IMAGE MEDIA SECTION, THE INSTITUTE OF TELEVISION
    ENGINEERS OF JAPAN, December 1996, (Tokyo), p. 33-38.;

ABSTRACT EP 933939 A1
  A scene descriptor SD, object descriptors ODs and respective bitstreams
  ESs are separated by a demultiplexer circuit, and the respective
  bitstreams ESs are decoded by decoders 207-1 to 207-n. Within output data
  from the decoders, output data associated with the same object descriptor
  OD (output data composing the same object) are mixed by a mixer circuit
  261. Subsequently, the mixed output data is supplied to an object
  synthesizer circuit 271-i of a synthesizer circuit 252 which is supplied
  with a corresponding node. Then, the object synthesizer circuit 271-i
  corresponds one image to one object to perform texture mapping.
ABSTRACT WORD COUNT: 99

LEGAL STATUS (Type, Pub Date, Kind, Text):
 Application: 990616 A1 International application (Art. 158(1))
 Application: 990804 A1 Published application (A1with Search Report
                            ;A2without Search Report)
 Examination: 990804 A1 Date of filing of request for examination:
                            990318
 Search Report: 991222 A1 Date of drawing up and dispatch of
                            supplementary:search report 19991105
 Change: 991222 A1 International Patent Classification changed:
                            19991030
 Change: 991222 A1 International Patent Classification changed:
                            19991030
LANGUAGE (Publication,Procedural,Application): English; English; Japanese
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9931	1953
SPEC A	(English)	9931	12660
Total word count - document A			14613
Total word count - document B			0
Total word count - documents A + B			14613

...SPECIFICATION predetermined texture and a signal indicative of its
  transparency from the memory 152 and the memory 153 based on the
  three-dimensional object information, and **maps** the **texture** to the
  three-dimensional object. The signal representative of the transparency

indicates the transparency of the texture at a corresponding location, and therefore indicates the transparency of the object at the position to which the **texture** at the corresponding position is **mapped** . The rendering circuit 155 supplies a two-dimensional transform circuit 156 with a signal of the object to which the **texture** has been **mapped** . The two-dimensional transform circuit 156 in turn transforms the three-dimensional object to a two-dimensional image signal produced by mapping the three-dimensional object to a two-dimensional **plane** based on **view** **point** information supplied from the outside. The three-dimensional object transformed into a two-dimensional image signal is further outputted to the outside. The texture may...outputted to the two-dimensional transform circuit 156.

The two-dimensional transform circuit 156.is supplied with two-dimensional or three-dimensional objects, to which **textures** have been **mapped** , from the object synthesizer circuits 271-1 to 271-n, the number of which is equal to that of the nodes. The two-dimensional transform circuit 156 maps a three-dimensional object to a two-dimensional **plane** based on **view** **point** information supplied from the outside and the signals indicative of the position and the size of the image (POS, SZ) to transform the three-dimensional...

12/5,K/3   **(Item 3 from file: 348)**
DIALOG(R)File 348:European Patents
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01029171
Image processing method and apparatus with polygon division
Bildverarbeitungsgerat und Verfahren mit Polygonteilung
Appareil et procede de traitement d'images avec division de polygones
PATENT ASSIGNEE:
  NEC CORPORATION, (236690), 7-1, Shiba 5-chome Minato-ku, Tokyo, (JP),
    (applicant designated states:
    AT;BE;CH;CY;DE;DK;ES;FI;FR;GB;GR;IE;IT;LI;LU;MC;NL;PT;SE)
INVENTOR:
  Kawasaki, Tomuyuki NEC IC Microcomputer Syst. Ltd., 403-53, Kosugimachi
    1-chome, Nakahara-ku, Kawasaki-shi, Kanagawa, (JP)
LEGAL REPRESENTATIVE:
  Glawe, Delfs, Moll & Partner (100692), Patentanwalte Postfach 26 01 62,
    80058 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 917106 A2 990519 (Basic)
APPLICATION (CC, No, Date):   EP 98121237 981106;
PRIORITY (CC, No, Date): JP 97315655 971117
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
  LU; MC; NL; PT; SE
INTERNATIONAL PATENT CLASS: G06T-015/10;
ABSTRACT EP 917106 A2

In an image processing apparatus, a polygon dividing section (16) selectively divides each of a set of polygons approximately representing a three-dimensional object based on a geometric data of the polygon and a reference data to convert the set of polygons into a new set of polygons. A brightness calculating section (18) calculates a brightness of each of apexes of each of the new set of polygons to represent the three-dimensional object when a light is irradiated to the three-dimensional object. A display control section (12) displays a three-dimensional image corresponding to the three-dimensional object viewed from a viewpoint on a display unit with the calculated brightnesses.
ABSTRACT WORD COUNT: 108

LEGAL STATUS (Type, Pub Date, Kind, Text):
 Application: 990519 A2 Published application (A1with Search Report
                           ;A2without Search Report)
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language   Update   Word Count
     CLAIMS A (English)   9920   1296
     SPEC A   (English)   9920   5032

...SPECIFICATION plane deleting section 21 has a function of giving a
limitation to remove the display of an image portion which cannot be
viewed from the **viewpoint** . The hidden **plane** deleting section 21
receives the polygon having the screen coordinates, the brightness and
the **texture**   **mapping** address from the screen projecting section 19 as
each apex data. Then, the hidden plane deleting section 21 interpolates
each apex data and determines a...

12/5,K/4   (Item 4 from file: 348)
DIALOG(R)File 348:European Patents
(c) 2000 European Patent Office. All rts. reserv.

00985938
Image compression
Bildkompression
Compression d'images
PATENT ASSIGNEE:
  TEXAS INSTRUMENTS INC., (279076), 13500 North Central Expressway, Dallas,
     Texas 75243, (US), (applicant designated states:
     AT;BE;CH;CY;DE;DK;ES;FI;FR;GB;GR;IE;IT;LI;LU;MC;NL;PT;SE)
INVENTOR:
  Liang, Jie, 1800 E. Spring Creek Parkway, Apt. 535, Plano, Texas 75074,
     (US)
LEGAL REPRESENTATIVE:
  Potter, Julian Mark et al (80064), D. Young & Co., 21 New Fetter Lane,
     London EC4A 1DA, (GB)
PATENT (CC, No, Kind, Date): EP 892557 A1   990120 (Basic)
APPLICATION (CC, No, Date):   EP 98305736 980717;
PRIORITY (CC, No, Date): US 53043 P 970718
DESIGNATED STATES: DE; FR; GB; IT; NL
INTERNATIONAL PATENT CLASS: H04N-007/26;

ABSTRACT EP 892557 A1
    A method of image encoding using subband decomposition followed by
  modified zerotree coding with symbols for zero and significant zerotree
  roots and isolated zeroes and isolated significant coefficients.
ABSTRACT WORD COUNT: 29

LEGAL STATUS (Type, Pub Date, Kind, Text):
 Application: 990120 A1 Published application (A1with Search Report
                             ;A2without Search Report)
 Examination: · 990714 A1 Date of filing of request for examination:
                             990517
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language   Update   Word Count
     CLAIMS A (English)   9903   127
     SPEC A   (English)   9903   7221
Total word count - document A   7348   .
Total word count - document B   0
Total word count - documents A + B   7348

...SPECIFICATION a recent architecture that takes use of JPEG-based
  compression for texture mapping. The preferred embodiment algorithm can
  also be applied here to achieve efficient **texture**   **mapping** .
    The Mip **texture**   **mapping** technique utilizes multiresolution
  representation of a image to reduce computation in **texture**   **mapping** .
  In traditional Mip **mapping** , a pyramid of images of various resolutions
  is generated and stored, which can take up to 1 1/3 storage space of the
  original image...

...a lookup table for each 64x64 blocks similar to the chunking technology
  adopted in Tallisman. The graphic hardware can choose the resolution and

quality (bit-**plane**) a●rding to the **view** point and●code the needed blocks. This technology enables storing of large size images on the graphic board as well as flexibility in choosing the resolution...

12/5,K/5   (Item 5 from file: 348)
DIALOG(R)File 348:European Patents
(c) 2000 European Patent Office. All rts. reserv.

00816245
A volume rendering apparatus and method
Verfahren und Vorrichtung zur Volumendarstellung
Methode et appareil de rendu d'un volume
PATENT ASSIGNEE:
  MITSUBISHI DENKI KABUSHIKI KAISHA, (208580), 2-3, Marunouchi 2-chome
    Chiyoda-ku, Tokyo 100, (JP), (applicant designated states: DE;FR;GB)
INVENTOR:
  Negishi, Hiroyasu, c/o Mitsubishi Denki K.K., 2-3, Marunouchi 2-chome,
    Chiyoda-ku, Tokyo 100, (JP)
  Kameyama, Masatoshi, c/o Mitsubishi Denki K.K., 2-3, Marunouchi 2-chome,
    Chiyoda-ku, Tokyo 100, (JP)
LEGAL REPRESENTATIVE:
  Pfenning, Meinig & Partner (100961), Mozartstrasse 17, 80336 Munchen,
    (DE)
PATENT (CC, No, Kind, Date): EP 758118 A2 970212 (Basic)
                              EP 758118 A3 980311
APPLICATION (CC, No, Date):   EP 96110667 960702;
PRIORITY (CC, No, Date): JP 95203191 950809
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: G06T-017/00; G06T-011/00;

ABSTRACT EP 758118 A2
    Volume rendering apparatus including a voxel memory, a parameter
    provider, an address generator, a mapping unit, an image memory and a
    blender. The voxel memory stores original volume data. A parameter
    provider calculates a parameter of a volume plane which slices the volume
    object orthogonally to a direction of view, calculates a parameter of a
    three-dimensional mapping plane which slices the mapping object according
    to a point of view coordinate system and converts the three-dimensional
    mapping plane to a two-dimensional mapping plane. An address generator
    generates voxel memory addresses and image memory addresses and a mapping
    unit maps the volume plane on each of the mapping planes. An image memory
    stores mapping data and rendering data and a blender performs blending of
    data in the image memory and data on each of the mapping planes and
    writes the blended data back in the image memory.
ABSTRACT WORD COUNT: 146

LEGAL STATUS (Type, Pub Date, Kind, Text):
 Application: 970212 A2 Published application (A1with Search Report
                             ;A2without Search Report)
 Change: 980304 A2 Obligatory supplementary classification
                             (change)
 Search Report: 980311 A3 Separate publication of the European or
                             International search report
 Examination: 980422 A2 Date of filing of request for examination:
                             980226
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language   Update   Word Count
     CLAIMS A (English) EPAB97   836
     SPEC A   (English) EPAB97   10215
Total word count - document A   11051
Total word count - document B   0
Total word count - documents A + B 11051

...SPECIFICATION volume data and a mapping object corresponding to the
   volume object, receiving a direction of view for the volume object,
   generating a plurality of volume **planes** orthogonal to the **direction**

of **view** and a plurali... f mapping **planes** correspondi... o the volume
object, performing two-dimensional **texture** **mapping** for each of the
plurality of mapping planes by using each of the plurality of volume
planes as a texture plane, and blending three-dimensional...

12/5,K/6   (Item 6 from file: 348)
DIALOG(R)File 348:European Patents
(c) 2000 European Patent Office. All rts. reserv.

00766483
Perspective correction of texture in graphics by adaptive approximation
Perspektifkorrektur von Texturen in graphischen Bildern durch adaptives
   Annahern
Correction de perspective de texture d'images graphiques par approximation
   adaptive
PATENT ASSIGNEE:
  SUN MICROSYSTEMS, INC., (1392730), 2550 Garcia Avenue, Mountain View, CA
     94043, (US), (applicant designated states: DE;GB;SE)
INVENTOR:
  Donovan, Walter E., 647 Escuela Place, Milpitas, California 95036, (US)
LEGAL REPRESENTATIVE:
  W.P. Thompson & Co. (101051), Coopers Building, Church Street, Liverpool
     L1 3AB, (GB)
PATENT (CC, No, Kind, Date):   EP 718797 A2 960626 (Basic)
                               EP 718797 A3 960814
APPLICATION (CC, No, Date):   EP 95309215 951219;
PRIORITY (CC, No, Date): US 358284 941219
DESIGNATED STATES: DE; GB; SE
INTERNATIONAL PATENT CLASS: G06T-015/00; G06T-015/10;
ABSTRACT EP 718797 A3
    The present invention provides a computer graphics system with a texel
  value generator capably of generating texel values using a minimal
  amount of computationally intensive divisions while maintaining a
  selectable texel accuracy criteria along a scan line. This is
  accomplished by adaptively selecting divisional points which delineate
  the scan line segments along each scan line such that the divisional
  points are as widely spaced as possible without exceeding the selected
  texel accuracy criteria. Having selected the texel accuracy criteria,
  such as a texel error bound optimally spaced, divisional points along
  the scan lines are selected as a function of the selected accuracy
  criteria. In general, since texture gradients are not evenly distributed
  over the surface of a given object and texture variations are present
  between different objects of the image, it is advantageous to adaptively
  select division points one at a time, skipping as many pixels in between
  divisional points as the local texture gradient will allow. Accurate
  texel values are computed at these divisional points and also at the end
  points of the scan line. Approximate texel values are then computed for
  the pixels located between adjacent pair of divisional points along the
  scan line using a suitable scheme such as linear interpolation. (see
  image in original document)
ABSTRACT WORD COUNT: 230

LEGAL STATUS (Type, Pub Date, Kind, Text):
 Application: 960626 A2 Published application (A1with Search Report
                             ;A2without Search Report)
 Change: 960731 A2 Obligatory supplementary classification
                             (change)
 Search Report: 960814 A3 Separate publication of the European or
                             International search report
 Examination: 970205 A2 Date of filing of request for examination:
                             961211
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language   Update   Word Count
     CLAIMS A (English)   EPAB96   1091
     SPEC A   (English)   EPAB96   2869
Total word count - document A   3960

...SPECIFICATION normal, transparency or other surface property applied to
a surface of a graphics object in such a way that the pattern appears
attached to the **surface** as the **viewpoint** and perspective varies. In
order to realistically display three dimensional objects in a high
quality two dimensional image on the display device, a perspectively
correct **texture mapping** value, called a **texel** value, is generated
for each pixel to modify the pixel values of the image.
  Mathematical models have been employed to provide excellent image
quality but...

12/5,K/7   (Item 7 from file: 348)
DIALOG(R)File 348:European Patents
(c) 2000 European Patent Office. All rts. reserv.

00643321
Method and apparatus for an adaptive texture mapping controller
Verfahren und Vorrichtung zur adaptiven Steuerung der Texturabbildung
Methode et dispositif adaptif de controle de topographie de texture
PATENT ASSIGNEE:
  SUN MICROSYSTEMS, INC., (1392732), 2550 Garcia Avenue, Mountain View,
    California 94043-1100, (US), (Proprietor designated states: all)
INVENTOR:
  Kamen, Yakov, 19334 Greenwood Drive, Cupertino, California 95014, (US)
  Sabada, Uma, 3475 Granada Avenue, Nr. 386, Santa Clara, California 95051,
    (US)
LEGAL REPRESENTATIVE:
  Wombwell, Francis (46021), Potts, Kerr & Co. 15, Hamilton Square,
    Birkenhead Merseyside L41 6BR, (GB)
PATENT (CC, No, Kind, Date):   EP 622747 A2 941102 (Basic)
                               EP 622747 A3 950201
                               EP 622747 B1 000531
APPLICATION (CC, No, Date):   EP 94301239 940222;
PRIORITY (CC, No, Date): US 41073 930401
DESIGNATED STATES: DE; FR; IT; NL; SE
INTERNATIONAL PATENT CLASS: G06F-015/10
CITED PATENTS (EP B): EP 550244 A
CITED REFERENCES (EP B):
  GRAND PRIX. SUPPLEMENT TECHNIQUE, 1991, TETBURY UK pages 1 - 20;

ABSTRACT EP 622747 A2
  The present invention provides a method and apparatus for an adaptive
texture mapping controller which provides a way for computer graphics
system users or other functions in a graphical display system, to trade
off object image rendering speed for object image texture quality. This
trade-off is accomplished by providing a plurality of control signals to
the adaptive texture mapping controller which indicate the level of
texture quality that the user or other function desires. Upon recognizing
these control signals, the adaptive texture mapping controller selects a
computation method to be used in generating pixel values necessary to
provide the desired level of image texture quality.
  The adaptive texture mapping controller is able to determine an
appropriate method for calculating the end points of span sections of
scan lines to be used for the display, based upon a function of the knot
parameters which correspond to the vertices which describe each edge of a
polygon section of the projected object and one or more of the control
signals provided, and then to determine an appropriate interpolation
method for calculating the pixel values for pixels on each span chosen,
based on a function of the span end points and one or more of the control
signals provided. These functions of the distance between knot parameters
on a polygon edge or the distance between end points of a span can be
mathematical functions of pairs of knot parameters or pairs of end points
respectively.
  The adaptive texture mapping controller is able to determine an
appropriate computation method for a given one of a plurality of

hierarchical levels of ⬤age parameter calculation, wher⬤a set of
control signals is supplied for each level. (see image in original
document)
ABSTRACT WORD COUNT: 286
NOTE:
Figure number on first page: 4

 12/5,K/8   (Item 8 from file: 348)
DIALOG(R)File 348:European Patents
(c) 2000 European Patent Office. All rts. reserv.

00386369
Method and apparatus for displaying a translucent object
Anzeigeverfahren und -gerat fur ein durchsichtiges Objekt
Methode et appareil pour afficher un objet translucide
PATENT ASSIGNEE:
 DAIKIN INDUSTRIES, LIMITED, (605933), Umeda Center Building, 4-12
    Nakazaki-nishi 2-chome, Kita-ku, Osaka-shi, Osaka-fu 530, (JP),
    (applicant designated states: DE;FR;GB)
INVENTOR:
 Obata, Koei, Daikin Higashikusatsu Shataku, No. 4-207, 40, Higashikusatsu
    5-chome, Kusatsu-shi, Shiga, 525, (JP)
LEGAL REPRESENTATIVE:
 Prufer, Lutz H., Dipl.-Phys. (38291), Harthauser Strasse 25d, 81545
    Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 379225 A2 900725 (Basic)
                              EP 379225 A3 920805
                              EP 379225 B1 970402
APPLICATION (CC, No, Date):   EP 90101246 900122;
PRIORITY (CC, No, Date): JP 8912158 890120
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: G06T-015/00; G01N-021/47;
CITED PATENTS (EP A): EP 137233 A

ABSTRACT EP 379225 A2
    A method for displaying a translucent object on a display screen is
    disclosed which includes a step of displaying a translucent object by
    providing a diffused transmitted light component (Itr) instead of a
    diffused reflection light component (Idiff) and a specular reflection
    light component (Ispec) as are necessary for displaying an object as an
    opaque object. A method for displaying a translucent object on a screen
    is also disclosed which includes a step of judging whether or not an
    object to be displayed is to be displayed as a translucent object based
    upon the relation of the viewpoint and a light source (L1, L2) to the

object to be displayed● (see image in original documen●
ABSTRACT WORD COUNT: 119

LEGAL STATUS (Type, Pub Date, Kind, Text):
 Application: 900725 A2 Published application (A1with Search Report
                             ;A2without Search Report)
 Search Report: 920805 A3 Separate publication of the European or
                             International search report
 Examination: 930107 A2 Date of filing of request for examination:
                             921104
 Examination: 950426 A2 Date of despatch of first examination report:
                             950314
 Grant: 970402 B1 Granted patent
 Lapse: 980114 B1 Date of lapse of the European patent in a
                             Contracting State: DE 970703
 Lapse: 980114 B1 Date of lapse of the European patent in a
                             Contracting State: DE 970703, FR 970829
 Oppn None: 980325 B1 No opposition filed
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text Language   Update   Word Count
      CLAIMS A (English)   EPABF1   759
      CLAIMS B (English)   EPAB97   533
      CLAIMS B (German)   EPAB97   500
      CLAIMS B (French)   EPAB97   599
      SPEC A   (English)   EPABF1   4710
      SPEC B   (English)   EPAB97   4010
Total word count - document A   5469
Total word count - document B   5642
Total word count - documents A + B 11111

...SPECIFICATION similar to its actual appearance.
   When a similar display is to be obtained by using conventional method,
the band is mapped on the nearest-the-**viewpoint** **surface** in a portion
through which the band is to be seen by a **texture** **mapping** method. The
color of the band to be mapped is determined to be faint, corresponding
to how the band would be seen through the paper...

...SPECIFICATION similar to its actual appearance.
   When a similar display is to be obtained by using conventional method,
the band is mapped on the nearest-the-**viewpoint** **surface** in a portion
through which the band is to be seen by a **texture** **mapping** method. The
color of the band to be mapped is determined to be faint, corresponding
to how the band would be seen through the paper...

 12/5,K/9   (Item 9 from file: 348)
DIALOG(R)File 348:European Patents
(c) 2000 European Patent Office. All rts. reserv.

00273503
A method for modulating color for effecting color cell texture.
Farbmodulationsverfahren zur Texturausfuhrung von Farbzellen.
Methode de modulation de couleur pour effectuer la texturation de cellule
    couleur.
PATENT ASSIGNEE:
. GENERAL ELECTRIC COMPANY, (203903), 1, River Road, Schenectady New York
    12345, (US), (applicant designated states: DE;FR;GB;IT)
INVENTOR:
  Chandler, Jimmy Everett, 4325 South Atlantic Avenue, Ponce Inlet Florida
    32019, (US)
  Fadden, Richard Gerry, 195 Cambridge Court, Ormond Beach Florida 32074,
    (US)
LEGAL REPRESENTATIVE:
  Pratt, Richard Wilson et al (46454), London Patent Operation G.E.
    TECHNICAL SERVICES CO. INC. Burdett House 15/16 Buckingham Street,
    London WC2N 6DU, (GB)
PATENT (CC, No, Kind, Date): EP 272863 A2 880629 (Basic)

ABSTRACT EP 272863 A2
    A full color real time cell texture generator uses a quantization
scheme, preferably a tapered quantization scheme (402-412), which
establishes a small set of colors representative of all colors of a
source image. A source image to be displayed is quantized (414) by
selecting the color of the small set nearest the color of the source
image for each cell of the source image. Nearness can be measured as
Euclidian distance in a three-space coordinate system of the primary
colors: red, green and blue. In a specific embodiment, an 8-bit
modulation code is used to control each of the red, green, blue and
translucency content of each display pixel, thereby permitting
independent modulation for each of the colors forming the display image.

ABSTRACT WORD COUNT: 126

LEGAL STATUS (Type, Pub Date, Kind, Text):
 Application: 880629 A2 Published application (A1with Search Report
                              ;A2without Search Report)
 Search Report: 910206 A3 Separate publication of the European or
                              International search report
 Examination: 910918 A2 Date of filing of request for examination:
                              910715
 Change: 920408 A2 Representative (change)
 Withdrawal: 920415 A2 Date on which the European patent application
                              was withdrawn: 920204
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	813
SPEC A	(English)	EPABF1	4168
Total word count – document A			4981
Total word count – document B			0
Total word count – documents A + B			4981

...SPECIFICATION images in this way for computer image generation is called
   cell texturing.
    The mathematics for determining the strike-point of a view ray from a
view   point to a parametrically defined curved **surface** is
   sufficiently complex so that typically a large amount of hardware, which
   may include a vector processor, is required to **apply** cell **texture** to
   such surfaces in real time systems. The vector processor performs
   computations for mapping video information from cells into display pixels
   of the scene to...

 12/5,K/10   (Item 1 from file: 349)

00728241
INTERACTIVE RACE CAR SIMULATOR SYSTEM
SYSTEME SIMULATEUR DE COURSES DE VOITURES INTERACTIF
Patent Applicant/Inventor:
  TAGGE James E, 41 Bentrup Court, Lenox, MA 01240, US, US (Residence),
     US (Nationality)
  TAGGE Michael J, 16 Davis Street, Pittsfield, MA 01201, US,
     US (Residence), US (Nationality)
  RINDGE Thomas L, 57A Church Street, Lenox, MA 01240, US, US (Residence),
     US (Nationality)
  HILCHEY Gary, 314 Safford Street, Bennington, VA 05201, US,
     US (Residence), US (Nationality)

ALCALA Adrian, 139 Alf⬤ Road, Great Barrington, MA 01⬤, US,
    US (Residence), US (Nationality)
AMBROSINO Timothy J, 18 Willow Lane, Pittsfield, MA 01201, US,
    US (Residence), US (Nationality)
Legal Representative:
  GROGAN J Kevin, McCormick, Paulding & Huber LLP, CityPlace II, 185 Asylum
    Street, Hartford, CT 06103-4102, US

English Abstract
  An interactive, vehicle simulator system receives input signals
  indicative of actions of a user who is located in a driver module. The
  simulator system also displays images and moves the driver module in
  accordance with the input signals. The simulator system comprises an
  input device (18) for generating the input signals, an image generator
  (14), an image presentation apparatus (26), a motion base (24), a motion
  base controller (22) and a game controller (12).

French Abstract
  L'invention concerne un systeme simulateur de vehicule interactif qui
  recoit des signaux d'entree indiquant des actions prises par un
  utilisateur se trouvant dans un module de conduite. Le systeme affiche
  egalement les images et deplace le module de conduite selon les signaux
  d'entree. Le systeme comprend un dispositif d'entree (18) destine a
  generer des signaux d'entree, un generateur d'images (14), un appareil de
  presentation d'images (26), une base de mouvement (24), un controleur de
  base de mouvement (22) et un controleur de jeu (12).

Fulltext Availability:
  Detailed Description
  Claims

Detailed Description
... i.e. at least twenty-four but preferably thirty images per second.

  In generating the second set of digital images, the image generator
  projects each **texture   map** derived from each source image from **point**
  -of-**view** position to the **surfaces** (polygons) of the polygon model.
  This projecting process provides the visual elements with further
  realistic detail. In the preferred embodiment, the point-of-view position
  ...

Claim
... the source image; and generating a texture map from each source image.

  18. The method of claim 17, further comprising the step of projecting
  each **texture   map** from a **point** -of-**view** position onto the **surface**
  polygons of the visual element.

  19. The method of claim 17, further comprising the step of projecting
  each **texture   map** from a plurality of **point** -of-**view** positions onto
  the **surface** polygons of the visual element.

12/5,K/11   (Item 2 from file: 349)
DIALOG(R)File 349:PCT Fulltext

00577257
METHOD AND APPARATUS FOR GENERATING A COMPUTER GRAPHICS IMAGE
PROCEDE ET APPAREIL PERMETTANT DE GENERER UNE IMAGE GRAPHIQUE INFORMATISEE
Patent Applicant/Assignee:
   PHILIPS ELECTRONICS NV, PHILIPS ELECTRONICS N.V. , Groenewoudseweg 1,
      NL-5621 BA Eindhoven , NL
   PHILIPS NORDEN AB, PHILIPS NORDEN AB , Kottbygatan 7, Kista, S-164 85
      Stockholm , SE
Inventor(s):
   VAN OVERVELD Cornelis Wilhelmus Antonius Marie, VAN OVERVELD, Cornelis,
      Wilhelmus, Antonius, Marie , Prof. Holstlaan 6, NL-5656 AA Eindhoven ,
      NL
Patent and Priority Information (Country, Number, Date):
   Patent: WO 9822911 A1 19980528
   Application: WO 97IB1307 19971020   (PCT/WO IB9701307)
   Priority Application: EP 96203265 19961121
Designated States: JP AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE
Main International Patent Class: G06T-015/10;
Publication Language: English
Filing Language: English
Fulltext Availability:
   Detailed Description
   Claims
Fulltext Word Count: 4098

English Abstract
 Parallactic changes in the appearance of a surface are simulated using
 texture   mapping . When an image is computed, more than one **texture** is
 mapped to the same surface. The coordinate **maps** of those **textures**
 are shifted relative to each other when the **viewpoint** from which the
 surface is viewed changes. One texture is normally shown on a pixel of
 the surface, unless indicates a "transparent" state for that pixel, in
 which case the other texture is shown.

French Abstract
   Cette invention consiste a simuler les changements parallactiques dans
   l'apparence d'une surface en effectuant un mappage de texture. Lorsqu'une
   image est calculee, on effectue le mappage de plusieurs textures sur la
   meme surface. Lorsque le point de vue depuis lequel on observe la surface
   change, les applications des coordonnees de ces textures sont decalees
   les unes par rapport aux autres. On fait normalement apparaitre une
   texture sur un pixel de la surface. Dans le cas ou ce pixel se trouve a
   un etat de "transparence", on fait alors apparaitre l'autre texture.
Fulltext Availability:
   Detailed Description
   Claims

Detailed Description
 ... a method of generating a two dimensional image of a surface in a
   higher dimensional model space, the method comprising the steps of
   selecting a **viewpoint** relative to the **surface** ; determining an area in
   the image in which the surface is visible as viewed from the viewpoint;
   texture   mapping a **texture** on said area, according to a coordinate
   map.

   The invention also relates to a computer graphics device comprising a
   mapping unit, for mapping a modeled...

...image according to the visual property assigned by the texture to the texture coordinate pair (u,v) to which that pixel coordinate pair (x,y) **maps** .

Texture   mapping provides good results for representing optical **texture** such as colouring. **Texture   mapping** works less well for representing geometrical texture, such as the texture associated with unevenness of the surface (bumpiness), because the appearance of such a texture depends on the direction from which it is viewed, and not merely on the position of pixels on the surface. This means that **texture mapping** lacks in realism when images of the same **surfaces** from different **viewpoints** have to be computed of **surfaces** that look differently from different angles, for example for simulating movement through the higher dimensional space or for Simulating stereoscopic image pairs.

In order to...image 10 to fill-in the visual effect of the profile and other properties of the surface, such as variations in absorption or reflection.

Ideally, **texture   mapping** should account for the change of appearance of the **surface** when the **viewpoint** 33 changes. To illustrate this change of appearance, figure 3 shows a further viewpoint 35 and a further line of view 36 from that viewpoint. It will be seen that from the further **viewpoint** parts of the **Surface** 31 are visible that are invisible from the original viewpoint 33 and vice versa. These parts may have optical properties that differ from those of...will be seen that the angle of incidence of the line of view 34, 36 from the viewpoint 33, 35 to the parts of the **surface** 31 changes when the **viewpoint** 33, 35 changes. This results in a change in the appearance of the **surface** observed from the **viewpoint** 33, 35. The resulting change in appearance is called a lighting change.
Figure 4 shows a ftirther side view of a surface, to illustrate a...

...point 47 on the first auxiliary surface 40 that lies on one line of view 44 with a second point 48 on the second auxiliary **surface** 41 from one **viewpoint** 43, lies on one line of view with a third point 49 on the second auxiliary **Surface** 41 from the other **viewpoint** 45. A pixel coordinate pair (x,y) that is **mapped** to the **texture** coordinate pair (LI,V) of the first point on the first auxiliary surface is therefore mapped either to a second or third texture coordinate pair of points on the second auxiliary **surface** 41, depending on the **viewpoint** 43, 45. When respective textures are associated with the two auxiliary surfaces 40, 41, and the **texture** values to which a pixel **maps** are combined to fill-in the image, e.g. by using either a first texture or a second texture, depending on a transparency state of...

Claim
...   A method of generating a two dimensional image of a surface in a higher dimensional model space, the method comprising the steps of selecting a **viewpoint** relative to the **surface** ; determining an area in the image in which the surface is visible as viewed from 5the viewpoint; **texture   mapping** a **texture** on said area, according to a coordinate map, characterized, in that the method comprises **texture   mapping** at least a further **texture** on said area according to a further coordinate map, a relative offset between the coordinate map and the further coordinate map being adjusted in dependence on the viewpoint; rendering a combination of said **mapped   texture** and said further **mapped   texture** in said area.

2. A method according to Claim 1, wherein said relative offset is in a direction of a normal projection on said Surface...

...unit, for mapping a modeled surface from a three or higher dimensional space on an area of pixels in a two dimensional image and a **texture** i-nappincl unit for **mapping** a **texture** on the pixels of said area, according to a coordinate **map** , characterized, in that the **texture**

mapping unit is arranged for **mapping** at least a further texture on
the pixels of said area according to a further coordinate **map** , the
texture **mapping** unit adjusting a relative offset between the
coordinate map and the further coordinate rnap being in dependence on the
viewpoint on the **surface** ; the computer graphics device comprising a
combining unit for forming a combination of **texture** values **mapped** on
the pixel in said are from said **texture** **map** and said further **texture**
map .

5. A computer graphics device according to Claim 4, wherein the **texture**
mapping unit adjusts said relative offset in a direction of a normal
projection on said surface of a line of sight from the **viewpoint** to the
surface , the relative offset having a magnitude which is a function of
an angle between said line of sight and a normal to the surface.

6...

12/5,K/12 **(Item 3 from file: 349)**
DIALOG(R)File 349:PCT Fulltext
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00546312
TECHNIQUES FOR CREATING AND MODIFYING 3D MODELS AND CORRELATING SUCH MODELS
 WITH 2D PICTURES
PROCEDE DE CREATION ET DE MODIFICATION DE MODELES TRIDIMENSIONNELS ET DE
 MISE EN CORRELATION DE TELS MODELES AVEC DES IMAGES BIDIMENSIONNELLES
Patent Applicant/Assignee:
  MUNCEY Grant J, MUNCEY, Grant, J., 5073 Shady Avenue, San Jose, CA 95129,
   US
Inventor(s):
  MUNCEY Grant J, MUNCEY, Grant, J., 5073 Shady Avenue, San Jose, CA 95129,
   US
Patent and Priority Information (Country, Number, Date):
  Patent: WO 9746975 A1 19971211
  Application: WO 97US9627 19970603 (PCT/WO US9709627)
  Priority Application: US 9619400 19960604; US 9747062 19970519; US
   97862417 19970523; US 97867013 19970602
Designated States: AU CA JP US AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL
 PT SE
Main International Patent Class: G06T-017/50;
International Patent Class: G06T-017/10; G06T-017/20; G06T-017/40;
Publication Language: English
Fulltext Availability:
  Detailed Description
  Claims
Fulltext Word Count: 23921

English Abstract
  A computer­implemented technique allows a user to perform difficult
  tasks such as extracting and manipulating 3D objects in 2D images of 3D
  scenes, and placing modeled 3D objects in 2D images of 3D scenes. The
  system displays a wireframe cage of the desired type of 3D object. The
  user drags control handles of the cage onto corresponding vertices of the
  pictured object. The system responds by determining an orientation and
  position of the modeled object in 3D space, and projecting at least some
  elements of the modeled object onto a projection plane. Portions of the
  2D picture are associated with visible surface portions of the modeled
  object as projected onto the image plane. As the user manipulates the
  object, as for example by translating or rotating it, the portions of the
  picture remain associated with the surface portions of the object in its
  new position or orientation. The result is that the user can, in effect,
  select the 2D representation of the object, pull it out of the scene, and
  manipulate it as a 3D object.
French Abstract
  La presente invention concerne un procede mis en oeuvre sur ordinateur et
  permettant a un utilisateur d'executer des travaux difficiles tels que
  l'extraction et la manipulation d'objets tridimensionnels dans les images

bidimensionnelles de s●es tridimensionnelles, puis de●ttre en places
des objets tridimensionnels modelises dans les images bidimensionnelles
de scenes tridimensionnelles. Le systeme affiche un trace squelettique
correspondant a l'objet tridimensionnel voulu, puis l'utilisateur place
le trace squelettique sur les sommets correspondants de l'objet. Le
systeme reagit en determinant l'orientation et la position de l'objet
modelise dans un volume tridimensionnel, et en projetant au moins
quelques elements de l'objet modelise sur un plan de projection. Des
parties de l'image bidimensionnelle sont associees aux surfaces
partielles visibles de l'objet modelise telles qu'elles se projettent sur
un plan d'image. Lorsque l'utilisateur manipule l'objet, par exemple en
lui faisant faire une translation ou une rotation, les parties de l'image
restent associees avec les surfaces partielles de l'objets dans ses
nouvelles position et orientation. Cela permet a l'utilisateur de
selectionner effectivement la representation bidimensionnelle, de la
sortir de la scene et de la manipuler comme un objet tridimensionnel.

Fulltext Availability:
  Detailed Description

Detailed Description
... of the polygon surfaces after operations in manipulation mode).

  However, in the preferred specific implementation, the colors on the
  surfaces are not stored as separate **texture maps** . Rather, the
  manipulation mode pixel values are determined from the construction mode
  image and the 3D geometry information obtained as a result of operations
  in...

...during construction mode), is projected back to the viewpoint. The ray
  from the point on the object in its original determined position back to
  the **viewpoint** intersects the image **plane** at a location whose color is
  the desired color for the pixel to be colored.

  The construction-mode image is a grayscale downsampled version of...

 12/5,K/13   (Item 4 from file: 349)
DIALOG(R)File 349:PCT Fulltext
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00336690
**TEXTURED SPHERE AND SPHERICAL ENVIRONMENT MAP RENDERING USING TEXTURE MAP
  DOUBLE INDIRECTION**
**RENDU DE SPHERE A SURFACE TEXTUREE ET DE CARTE GEOGRAPHIQUE SPHERIQUE A
  L'AIDE D'UN ADRESSAGE INDIRECT DOUBLE D'UNE CARTE TEXTUREE**
Patent Applicant/Assignee:
  APPLE COMPUTER INC
Inventor(s):
  MILLER Gavin S P
  CHEN Shenchang Eric
Patent and Priority Information (Country, Number, Date):
  Patent: WO 9323835 A1 19931125
  Application: WO 93US2678 19930323   (PCT/WO US9302678)
  Priority Application: US 92880240 19920508
Designated States: AT AU BB BG BR CA CH CZ DE DK ES FI GB HU JP KP KR KZ LK
  LU MG MN MW NL PL PT RO RU SD SE SK UA VN AT BE CH DE DK ES FR GB GR IE
  IT LU MC NL PT BJ CF CG CI CM GA GN ML MR NE SN TD TG
Main International Patent Class: G09B-009/08;
International Patent Class: G09B-029/00;
Publication Language: English
Fulltext Availability:
  Detailed Description
  Claims
Fulltext Word Count: 7907

English Abstract
  A system for rendering textured spheres and spherical environment maps

provides for real time ⬤tation of a textured sphere (5⬤ and panning of the view into a spherical environment map (407), along multiple axes (502) without the need for special rendering hardware. The method is comprised of the steps of: providing a parmetric spherical environment map (501) of the image to be viewed, generating a screen look-up table (404) comprised of look-up addresses, generating a parametric look-up table (408) comprised of index values into the parametric spherical environment map, and for each look-up address (405) in the screen look-up table (404), mapping to an entry in the parametric look-up table (408), retrieving the value in the entry, and using the value to retrieve pixel values (411) from the parametric spherical environment map. Rotation or movement of the view being seen is accomplished by adding offsets to the look-up address and/or the index values.

French Abstract

Un systeme permettant de rendre des spheres texturees et des cartes geographiques spheriques comprend la rotation en temps reel d'une sphere texturee (501) et la visualisation panoramique des images, le long d'axes multiples (502), dans une carte geographique spherique (407), sans qu'il soit necessaire d'utiliser un materiel special pour le rendu. Le procede consiste a: produire une carte geographique parametrique et spherique (501) de l'image a visualiser, generer une table a consulter (404) d'ecran, comprenant des adresses a consulter, generer une table a consulter parametrique (408) comprenant des valeurs d'index dans la carte parametrique, et, pour chaque adresse a consulter (405) dans la table a consulter (404) d'ecran, etablir une correspondance avec une entree dans la table a consulter parametrique (408), recuperer la valeur dans l'entree, et utiliser cette valeur pour recuperer des valeurs de pixel (411) a partir de la carte geographique parametrique. La rotation ou le deplacement du champ visuel en cours d'observation est effectue au moyen de decalages ajoutes a l'adresse a consulter et/ou aux valeurs d'index.

Fulltext Availability:
  Detailed Description

Detailed Description
... of freedom for the view point may be updated.
  -44 KNOWN]FECHAnlynss jFCOUR RENDERING SPHERICAL ENIVIROTTMEN17 MAMS A related area to such rendering is termed **texture mapping** . In **texture mapping** a **texture** file (or image) is applied to points on an object being rendered. This is conceptually analogous to putting a decal on a solid object. In any event, rendering spherical environment **maps** and **textured** spheres may be done using a number of different known approaches. The most appropriate approach for doing this will depend on the number of degrees...

...session. In any event, when rendering a parametric spherical environment map, one may consider the environment to be a texture on the surface of a **sphere** in 3-D space. A **viewpoint** with respect to the **sphere** will determine what is seen by the viewer. For example, the **viewpoint** ma3y be outside the **sphere** looking at it as a whole, or it may be a perspective view from within the sphere.

Direct Scan-Conversion
For the general perspective case...

00698351
HOW TO DO TANGENT SPACE LIGHTING IN A DEFERRED SHADING ARCHITECTURE
COMMENT ASSURER UN ECLAIRAGE D'ESPACE TANGENTIEL DANS UNE ARCHITECTURE D'OMBRAGE RETARDE
Patent Applicant/Assignee:
  RAYCER INC, RAYCER, INC. , 2585 East Bayshore Road, Palo Alto, CA 94303 ,
    US
Inventor(s):
  DULUK Jerome F Jr, DULUK, Jerome, F., Jr. , 950 North California Avenue,
    Palo Alto, CA 94303 , US
  DODGEN Steven L, DODGEN, Steven, L. , 15735 Forest Hill Drive, Boulder
    Creek, CA 95006 , US
  PAPAKIPOS Matthew N, PAPAKIPOS, Matthew, N. , 1701 Oak Avenue, Menlo
    Park, CA 94025 , US
  TUCK Nathan D, TUCK, Nathan, D. , 8666 Somerset Avenue, San Diego, CA
    92123 , US
  BRATT Joseph P, BRATT, Joseph, P. , 1045 Oaktree Drive, San Jose, CA
    95129 , US
  HESSEL Richard E, HESSEL, Richard, E. , 3225 Flemington Court,
    Pleasanton, CA 94588 , US
Patent and Priority Information (Country, Number, Date):
  Patent: WO 0011614 A2 20000302 (WO 200011614)
  Application: WO 99US19036 19990820 (PCT/WO US9919036)
  Priority Application: US 9897336 19980820; US 98213990 19981217
Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE
  ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT
  LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT
  UA UG UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ UG ZW AM AZ BY KG KZ MD RU
  TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG
  CI CM GA GN GW ML MR NE SN TD TG
Publication Language: English
Filing Language: English
Fulltext Word Count: 58927

Fulltext Availability:
  Detailed Description

Detailed Description
... plane of surface V one coordinate of tangent space in plane of surface
   N surface normal at each vertex of a fragment to be illuminated; **P "**
  surface tangent along the u axis at each vertex of a fragment to be
   illuminated; **P " surface** tangent along the v axis at each vertex of a
   fragment to be illuminated; f,(u,v) partial derivative along the u axis
   of the input **texture map** computed at each point of the **texture map**
    (NOTE: according to the OpenGL standard, an input **texture map** is a
   1, 2 or 3-climensional array of values f(u,v) that define a height field
   in (u,v) space. In the SGI...

...in two directions (u and v) for each point of the height field); f,(u,v)
   partial derivative along the v axis of the input **texture map** computed
   at each point of the **texture map** (see discussion of f,(u,v)); L light
   vector in eye space; H half

00671212
MICROSCOPE GENERATING A THREE-DIMENSIONAL REPRESENTATION OF AN OBJECT AND IMAGES GENERATED BY SUCH A MICROSCOPE
MICROSCOPE GENERANT UNE REPRESENTATION TRIDIMENSIONNELLE D'UN OBJET ET IMAGES GENEREES PAR CE MICROSCOPE
Patent Applicant/Assignee:

LAUER Vincent, LAUER, Vincent , 1, villa de Beaute, F-94130 Nogent sur
     Marne , FR
Inventor(s):
   LAUER Vincent, LAUER, Vincent , 1, villa de Beaute, F-94130 Nogent sur
     Marne , FR

Claim
... A cette fin, le systeme peut acquerir periodiquement une image de
   reference. L'image de reference consiste par exemple en une image obtenue
   sur la **surface** de reception pour une onde d'eclairage fixe, qui n' ...
   le cas ou deux objectifs sont utilises, le pas d'echantillonnage et les
   axes sur l'image plane en frequence generee a partir d'une **surface** de
   reception associee a l'objectif en vis a-vis ne correspondent pas au pas
   d'echantillonnage et aux axes de la representation tridimensionnelle de
   ...de (201).

L'onde issue de l'objet (112) traverse l'objectif de microscope (113).
   Cet objectif est un objectif plan (qui donne une image **plane** d'un
   plan), a grande ouverture (par exemple 1,25), a **immersion** , et formant
   une **image** aggrandie de l'objet a une distance finie.

Dans le plan ou l'objectif forme normalement l'image de l'objet a
   observer, on interpose...

Set	Items	Description
S1	887	P()(SURFACE? OR SPHERE? OR PLANE? ?) OR PSURFACE? OR PSPHERE?
S2	245012	VIEWPOINT? OR VIEW(1N)POINT? ? OR DIRECTION(1W)VIEW? ?
S3	5937	(TEXTURE? OR TEXEL?)(5N)(MAP? ? OR MAPP? OR APPLICATION? OR APPLY?)
S4	1397	((FULL? ? OR COMPLETE? OR TOTAL? OR ENTIRE?)(2N)SURROUND? OR WRAP?()AROUND OR IMMERS????)(5N)(SCENE? ? OR IMAGE? OR DATA OR PICTURE? ? OR GRAPHIC? ?)
S5	187	SAMPL?(5N)(VISIBLE OR VIRTUAL OR DIGITAL)(3N)(WORLD? OR SPACE OR ENVIRON?)
S6	0	S1 AND S2 AND S3 AND (S4 OR S5)
S7	0	S2 AND S3 AND (S4 OR S5)
S8	0	S1 AND S3 AND (S4 OR S5)
S9	0	S1 AND S2 AND (S3 OR S4 OR S5)
S10	0	S1 AND (S3 OR S4 OR S5)
S11	219	S2 AND (S3 OR S4 OR S5)
S12	14	(S1 OR SURFACE? OR SHPERE? OR PLANE OR PLANES)(5N)S2 AND (S3 OR S4 OR S5)
S13	10	RD (unique items)
S14	1	AU=(OXAAL, F? OR OXAAL F?)
S15	81	(S1 OR SURFACE? OR SPHERE? OR PLANE OR PLANES) AND S11
S16	7527	(FULL? ? OR COMPLETE? OR TOTAL? OR ENTIRE?)(2N)SURROUND? OR WRAP?()AROUND OR IMMERS?????(5N)(SCENE? ? OR IMAGE? ? OR DATA OR PICTURE? OR GRAPHIC? ?)
S17	4543929	S1 OR SURFACE? OR PLANE OR PLANES OR SPHERE?
S18	0	S17 AND S2 AND S3 AND S16
S19	3	S17 AND S3 AND S16
S20	2	RD (unique items)
S21	2	S20 NOT S13
S22	0	S2 AND S16 AND S3

?

13/5/1   (Item 1 from file: 2)
DIALOG(R)File   2:INSPEC

6526612   INSPEC Abstract Number: C2000-04-6130B-062
 Title: **An efficient image** mapping **method for 3D surface** textures
   Author(s): Matsushita, K.; Kaneko, T.
   Author Affiliation: Dept. of Inf. & Comput. Sci., Toyohashi Univ. of
Technol., Japan
   Journal: Transactions of the Institute of Electronics, Information and
Communication Engineers D-II   vol.J83D-II, no.2   p.525-34
   Publisher: Inst. Electron. Inf. & Commun. Eng,
   Publication Date: Feb. 2000 Country of Publication: Japan
   CODEN: DTGDE7 ISSN: 0915-1923
   SICI: 0915-1923(200002)J83DII:2L.525:EIMM;1-K
   Material Identity Number: M973-2000-002
   Language: Japanese   Document Type: Journal Paper (JP)
   Treatment: Practical (P)
   Abstract: 3D computer graphics has been widely used lately, but it is a
laborious task to obtain surface data and texture data of a 3D object.
There are expensive scanners that extract such data for existing objects.
We are concerned with the problem of acquiring texture data for an object
whose surface data is already available with a low cost scanner or CT. With
the given surface data, we identify a minimal number of **viewpoints** which
can cover all the **surfaces** . Then we take photographs from the identified
viewpoints manually. Deviations from the specified locations are corrected
automatically by matching the external edges or silhouette of the object
with those computed from the 3D surfaces. The proposed method was tested
for CT data of three plastic toys, and good results were obtained. (17
 Refs)
   Descriptors: computer graphics; computerised tomography; image matching;
image scanners; image texture
   Identifiers: image mapping method; 3D surface textures; 3D computer
graphics; 3D object; image scanners; photographs; CT data; three
dimensional computer graphics; computerised tomography
   Class Codes: C6130B (Graphics techniques); C5260B (Computer vision and
image processing techniques)

   13/5/2   (Item 2 from file: 2)
DIALOG(R)File   2:INSPEC

6061868   INSPEC Abstract Number: B9812-6140C-116, C9812-5260B-067
 Title: **Multi-viewpoint stereo from uncalibrated video sequences**
   Author(s): Koch, R.; Pollefeys, M.; Van Gool, L.
   Author Affiliation: Katholieke Univ., Leuven, Belgium
   Conference Title: Computer Vision - ECCV'98. 5th European Conference on
Computer Vision. Proceedings   Part vol.1   p.55-71 vol.1
   Editor(s): Burkhardt, H.; Neumann, B.
   Publisher: Springer-Verlag, Berlin, Germany
   Publication Date: 1998 Country of Publication: Germany   2 vol.
(xvi+927+881) pp.
   ISBN: 3 540 64569 1   Material Identity Number: XX98-01494
   Conference Title: Computer Vision - ECCV'98 5th European Conference on
Computer Vision
   Conference Date: 2-6 June 1998   Conference Location: Freiburg, Germany
   Language: English   Document Type: Conference Paper (PA)
   Treatment: Theoretical (T); Experimental (X)
   Abstract: This contribution describes an automatic 3D surface modeling
system that extracts dense metric 3D surfaces from an uncalibrated video
sequence. A static 3D scene is observed from multiple viewpoints by freely
moving a video camera around the object. No restrictions on camera movement
and internal camera parameters like zoom are imposed, as the camera pose
and intrinsic parameters are calibrated from the sequence. Dense surface
reconstructions are obtained by first treating consecutive images of the

sequence as stereoscop● pairs and computing dense dispa●ty maps for all image pairs. All viewpoints are then linked by controlled correspondence linking for each image pixel. The correspondence linking algorithm allows for accurate depth estimation as well as image texture fusion from all **viewpoints** simultaneously. By keeping track of **surface** visibility and measurement uncertainty it can cope with occlusions and measurement outliers. The correspondence linking is applied to increase the robustness and geometrical resolution of surface depth as well as to remove highlights and specular reflections, and to create super-resolution **texture maps** for increased realism. The major impact of this work is the ability to automatically generate geometrically correct and visually pleasing 3D surface models from image sequences alone, which allows economic model generation for a wide range of **applications** . The resulting **textured** 3D surface models are highly realistic VRML representations of the scene. (26 Refs)

Descriptors: computational geometry; computer vision; feature extraction; image reconstruction; image representation; image resolution; image sequences; image texture; realistic images; stereo image processing; virtual reality

Identifiers: multi-viewpoint stereo; uncalibrated video sequences; 3D surface modeling; 3D surface extraction; video camera; camera pose; dense surface reconstructions; image sequence; stereoscopic pairs; dense disparity maps; correspondence linking; depth estimation; image texture fusion; surface visibility; measurement uncertainty; occlusions; outliers; robustness; geometrical resolution; super-resolution **texture maps** ; VRML representations

Class Codes: B6140C (Optical information, image and video signal processing); C5260B (Computer vision and image processing techniques); C1250 (Pattern recognition); C4260 (Computational geometry); C6130B (Graphics techniques)

13/5/3   (Item 3 from file: 2)

5032548   INSPEC Abstract Number: B9510-6140C-359, C9510-1250-191
Title: 3-D surface reconstruction from stereoscopic image sequences
Author(s): Koch, R.
Author Affiliation: Inst. fur Theor. Nachrichtentech. und Inf., Hannover Univ., Germany
Conference Title: Proceedings. Fifth International Conference on Computer Vision (Cat. No.95CB35744)   p.109-14
Publisher: IEEE Comput. Soc. Press, Los Alamitos, CA, USA
Publication Date: 1995 Country of Publication: USA   xix+1117 pp.
ISBN: 0 8186 7042 8
U.S. Copyright Clearance Center Code: 0 8186 7042 8/95/$4.00
Conference Title: Proceedings of IEEE International Conference on Computer Vision
Conference Sponsor: IEEE Comput. Soc. Tech. Committee on Pattern Anal. & Machine Intelligence
Conference Date: 20-23 June 1995   Conference Location: Cambridge, MA, USA
Language: English   Document Type: Conference Paper (PA)
Treatment: Applications (A); Practical (P)
Abstract: A stereoscopic scene analysis system for 3-D modeling of objects from stereoscopic image sequences is described. A dense map of 3-D surface points is obtained by image correspondence, object segmentation, interpolation, and triangulation. Emphasis is put on the accurate measurement of image correspondences from grey level images. The surface geometry of each scene object is approximated by a triangular wire-frame which stores the surface **texture** in **texture · maps** . Sequence processing serves to track camera motion and to fuse **surfaces** from different **view points** into a consistent 3-D **surface** model. From the textured 3-D models, highly realistic image sequences from arbitrary view points can be synthesized using computer graphics techniques. (26 Refs)
Descriptors: computer graphics; image sequences; interpolation; stereo

image processing; surface reconstruction
Identifiers: 3-D surface reconstruction; stereoscopic image sequences; stereoscopic scene analysis system; 3-D modeling; dense map; 3-D surface points; image correspondence; object segmentation; interpolation; triangulation; grey level images; triangular wire-frame; surface texture; **texture maps**; sequence processing; camera motion; 3-D surface model; computer graphics
Class Codes: B6140C (Optical information, image and video signal processing); B0290F (Interpolation and function approximation); C1250 (Pattern recognition); C5260B (Computer vision and image processing techniques); C4130 (Interpolation and function approximation); C6130B (Graphics techniques)

13/5/4   (Item 4 from file: 2)

4648173   INSPEC Abstract Number: C9405-5260B-224
Title: **Adaptive sampling and reconstruction for discontinuity preserving** texture- mapped **triangulation**
Author(s): Tanaka, H.T.; Kishino, F.
Author Affiliation: ATR Commun. Syst. Res. Labs., Kyoto, Japan
p.298-303
Publisher: IEEE Comput. Soc. Press, Los Alamitos, CA, USA
Publication Date: 1994   Country of Publication: USA   ix+307 pp.
ISBN: 0 8186 5310 8
U.S. Copyright Clearance Center Code: 0 8186 5310 8/94/$03.00
Conference Title: Proceedings of 1994 IEEE 2nd CAD-Based Vision Workshop
Conference Sponsor: IEEE
Conference Date: 8-11 Feb. 1994   Conference Location: Champion, PA, USA
Language: English   Document Type: Conference Paper (PA)
Treatment: Practical (P); Theoretical (T)
Abstract: The objective of this work is to use input data to construct a **texture -mapped** polyhedral representation of surfaces that can adapt to intrinsic surface properties, preserving their discontinuities, and might be used efficiently as an accurate 3D object model in graphical rendering. The authors present an adaptive sampling and reconstruction model for hierarchical triangulation of 3D objects. They have developed a parallel algorithm of adaptive mesh generation that recursively bisects mesh elements by increasing the number of mesh nodes according to local surface properties, such as surface orientation, curvature and color. The recursive subdivision based on such a **viewpoint** -invariant feature yields the hierarchical **surface** triangulation that is intrinsic to the surface, and satisfies the absolute accuracy criterion, because nodes are generated as many times as required until the entire surface has been approximated with a given threshold. The authors apply the algorithm to the adaptive sampling and reconstruction of range and color-texture images of human faces and fine antique dolls. (0 Refs)
Descriptors: image reconstruction; mesh generation; rendering (computer graphics)
Identifiers: adaptive sampling; reconstruction; discontinuity preserving; **texture -mapped** triangulation; graphical rendering; hierarchical triangulation; adaptive mesh; parallel algorithm; adaptive mesh generation; recursive subdivision; human faces; antique dolls
Class Codes: C5260B (Computer vision and picture processing); C4185 (Finite element analysis); C6130B (Graphics techniques)

13/5/5   (Item 5 from file: 2)

4514553   INSPEC Abstract Number: C9312-5260B-085
Title: **Automatic reconstruction of buildings from stereoscopic image sequences**
Author(s): Koch, R.

Author   Affiliation: ● Inst.   fur   Theor.   Nachrichtentech.   und
Informationsverarbeitung, Hannover Univ., Germany
    Journal: Computer Graphics Forum   vol.12, no.3   p.C339-50
    Publication Date: 1993 Country of Publication: UK
    CODEN: CGFODY ISSN: 0167-7055
    Conference Title: European Association for Computer Graphics 14th Annual
Conference and Exhibition. EUROGRAPHICS '93
    Conference Date: 6-10 Sept. 1993   Conference Location: Barcelona, Spain
    Language: English   Document Type: Conference Paper (PA); Journal Paper
(JP)
    Treatment: Practical (P)

    Abstract: A vision-based 3-D scene analysis system is described that is
capable to model complex real-world scenes like streets and buildings
automatically from stereoscopic image pairs. Input to the system is a
sequence of stereoscopic images taken with two standard CCD cameras and TV
lenses. The relative orientation of both cameras to each other is known by
calibration. The camera pair is then moved throughout the scene and a long
sequence of closely spaced views is recorded. Each of the stereoscopic
image pairs is rectified and a dense map of 3-D surface points is obtained
by area correlation, object segmentation, interpolation, and triangulation.
3-D camera motion relative to the scheme coordinate system is tracked
directly from the image sequence which allows to fuse 3-D **surface**
 measurements form different **viewpoints** into a consistent 3-D model
scene. The surface geometry of each scene object is approximated by a
triangular surface mesh which stores the surface **texture** in a **texture**
 map . From the **textured** 3-D models, realistic looking image sequences
from arbitrary view points can be synthesized using computer graphics. (24
 Refs)
    Descriptors: computer graphics; computer vision; image reconstruction;
image sequences; stereo image processing
    Identifiers: 3D scene analysis; virtual reality; stereoscopic image
sequences; real-world scenes; streets; buildings; stereoscopic image pairs;
CCD cameras; TV lenses; surface points; area correlation; object
segmentation; interpolation; triangulation; camera motion; image sequence;
surface geometry; triangular surface mesh; computer graphics
    Class Codes: C5260B (Computer vision and picture processing); C6130B (
Graphics techniques)

    13/5/6   (Item 6 from file: 2)
DIALOG(R)File   2:INSPEC
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03875904   INSPEC Abstract Number: A91056655, ·B91035362, C91031211
    **Title: A user interface for 3D reconstruction of computer tomograms or
magnetic resonance images**
    Author(s): Fruhauf, M.
    Author Affiliation: Fraunhofer-Arbeitsgruppe Graphische Datenverarbeitung
, Darmstadt, West Germany
    Conference Title: Scientific Computing and Automation (Europe) 1990.
Proceedings of the Scientific Computing and Automation (Europe) Conference
p.31-7
    Editor(s): Karjalainen, E.J.
    Publisher: Elsevier, Amsterdam, Netherlands
    Publication Date: 1990 Country of Publication: Netherlands   xii+498
 pp.
    ISBN: 0 444 88949 3
    Conference Date: 12-15 June 1990   Conference Location: Maastricht,
Netherlands
    Language: English   Document Type: Conference Paper (PA)
    Treatment: Practical (P)

    Abstract: Three-dimensional reconstruction of medical image data is
accomplished by especially developed volume rendering techniques. To make
these techniques available for the daily use in hospitals for diagnosis, a
special user interface is required. The most challenging part of the user
interface is the real-time interactive definition of viewing parameters for
volume rendering. Viewing parameters in this case are the **viewpoint** and
cut **planes** through the volume data set. The author uses an approach for

the fast rendering of volume data which is based on a scanline-based
texture mapping on a cube's surface. Furthermore, the author has
developed tools for interactive colour assignment, lighting, segmentation
and contour extraction which are included in the user interface. The user
interface solves the problem of real-time rotation and slicing of 16
megabyte CT data sets on graphics workstations. It follows the natural
understanding of rotation and is operated by using the workstation's mouse.
(12 Refs)
    Descriptors: biomedical NMR; computer graphics; computerised picture
processing; computerised tomography; medical diagnostic computing;
real-time systems; user interfaces
    Identifiers: data set slicing; cube surface; user interface; 3D
reconstruction; computer tomograms; magnetic resonance images; medical
image data; volume rendering techniques; hospitals; diagnosis; real-time
interactive definition; viewing parameters; viewpoint; cut planes;
scanline-based **texture mapping** ; interactive colour assignment; lighting
; segmentation; contour extraction; rotation; graphics workstations; mouse
    Class Codes: A8770E (Diagnostic methods and instrumentation); A8760G (
Laser beams, microwaves, and other electromagnetic waves); A8760J (
Corpuscular radiation and radioisotopes); B7510B (Radiation and
radioactivity applications); B6140C (Optical information processing); C7330
  (Biology and medicine); C5260B (Computer vision and picture processing);
C6180 (User interfaces); C6130B (Graphics techniques)

    13/5/7   (Item 1 from file: 8)
DIALOG(R)File   8:Ei Compendex(R)
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04367179   E.I. No: EIP95122937479
    **Title: Active 3D modeling by recursive viewpoint selection based on
symmetry**
    Author: Yoshida, Kazunori; Tanaka, Hiromi T.; Ohya, Jun; Kishino, Fumio
    Corporate Source: ATR Communication Systems Research Labs., Soraku-gun,
Kyoto, Jpn
    Conference Title: Intelligent Robots and Computer Vision XIV: Algorithms,
Techniques, Active Vision, and Materials Handling
    Conference Location: Philadelphia, PA, USA Conference Date:
19951023-19951026
    Sponsor: SPIE - Int Soc for Opt Engineering, Bellingham, WA USA
    E.I. Conference No.: 22417
    Source: Proceedings of SPIE - The International Society for Optical
Engineering v 2588 1995. Society of Photo-Optical Instrumentation
Engineers, Bellingham, WA, USA. p 326-336
    Publication Year: 1995
    CODEN: PSISDG   ISSN: 0277-786X   ISBN: 0-8194-1952-4
    Language: English
    Document Type: CA; (Conference Article)   Treatment: T; (Theoretical)
    Journal Announcement: 9605W3
    Abstract: This paper proposes a new method for creating 3D models of
objects efficiently from the silhouettes of objects in images acquired by
an active camera whose viewpoints are selected recursively based on
symmetry planes of the observed silhouettes. In the proposed method, to
obtain the initial view point, we use the assumption that an object takes a
stable pose under the influence of gravity by having a symmetry plane to
which the direction of gravity is constrained. We choose a point in the
direction of the gravity as the initial viewpoint. Then, the new view
points are determined based on information about the symmetry plane, where
the symmetry plane is obtained from the center of gravity and the axis of
inertia of the observed silhouette. This process is repeated until no new
view point is selected. Then, the 3D shape of the object is reconstructed
by processing voxel data based on the silhouette information acquired at
the selected view points. Finally, **textures** acquired by the observations
are **mapped** to the reconstructed 3D shape. We present some experimental
results that show the effectiveness of the proposed method. 3 Refs.
    Descriptors: *Mathematical models; Computer vision; Robotics; Three
dimensional; Image reconstruction; Mathematical techniques
    Identifiers: Recursive **viewpoint** selection; Silhouettes; Symmetry

plane ; 3D shapes
   Classification Codes:
   741.2 (Vision); 731.6 (Robot Applications); 723.2 (Data Processing)
   921 (Applied Mathematics); 741 (Optics & Optical Devices); 731
(Automatic Control Principles); 723 (Computer Software)
   92 (ENGINEERING MATHEMATICS); 74 (OPTICAL TECHNOLOGY); 73 (CONTROL
ENGINEERING); 72 (COMPUTERS & DATA PROCESSING)

13/5/8   (Item 1 from file: 34)

08901493   Genuine Article#: 343EH   Number of References: 18
Title: Real-time rendering algorithm based on a hybrid rendering scheme
Author(s): Zheng WT (REPRINT) ; Bao HJ; Peng QS; Sun HQ
Corporate Source: ZHEJIANG UNIV,STATE KEY LAB CAD&CG/HANGZHOU
   310027//PEOPLES R CHINA/ (REPRINT); CHINESE UNIV HONG KONG,/HONG
   KONG/HONG KONG/PEOPLES R CHINA/
Journal: PROGRESS IN NATURAL SCIENCE, 2000, V10, N2 (FEB), P141-146
ISSN: 1002-0071   Publication date: 20000200
Publisher: TAYLOR & FRANCIS LTD, 11 NEW FETTER LANE, LONDON EC4P 4EE,
   ENGLAND
Language: English   Document Type: ARTICLE
Geographic Location: PEOPLES R CHINA
Subfile: CC PHYS--Current Contents, Physical, Chemical & Earth Sciences
Journal Subject Category: MULTIDISCIPLINARY SCIENCES
Abstract: A real-time rendering algorithm based on a hybrid rendering
   scheme is presented. The key frames of the virtual scene are generated
   with a geometry-based approach, then a non-linear transformation to all
   visible points of each frame near the current viewpoint is performed to
   reveal their coplanar characteristics and a hierarchical polygon
   approximation of the local scene is set up. Any intermediate image
   between the two key frames could be obtained by re-projecting these
   polygons onto the view **plane** related to the current **viewpoint** . The
   gaps that might appear on the intermediate image are filled through
   bi-directional backward image warping. Experimental results show that
   our approach is insensitive to the complexity of the scene and has a
   satisfactory performance.
Descriptors--Author Keywords: virtual reality ; image-based rendering ;
   level of detail ; **texture   mapping**
Cited References:
   CHEN SE, 1993, V27, P279, COMPUTER GRAPHICS
   CHEN SE, 1995, V29, P29, COMPUTER GRAPHICS
   DARSA L, 1998, V22, P55, COMPUT GRAPH
   DARSA L, 1997, P25, P 1997 S INT 3D GRAP
   GORTLER SJ, 1996, V30, P43, COMPUTER GRAPHICS
   GREENE N, 1993, V27, P231, ACM COMPUTER GRAPHIC
   HOPPE H, 1996, V30, P99, COMPUTER GRAPHICS
   LEVOY M, 1996, V30, P31, COMPUTER GRAPHICS
   LUEBKE D, 1997, V31, P199, COMPUTER GRAPHICS
   MARK WR, 1997, P7, P 1997 S INT 3D GRAP
   MCMILLAN L, 1995, V29, P39, COMPUTER GRAPHICS
   REGAN M, 1994, V28, P155, COMPUTER GRAPHICS
   SHADE J, 1996, V30, P75, COMPUTER GRAPHICS
   SILLION FX, 1997, V16, P207, COMPUT GRAPH FORUM
   TELLER S, 1991, V25, P61, COMPUTER GRAPHICS
   TORBORG J, 1996, V30, P353, COMPUT GRAPH FORUM
   WANG Y, 1998, V17, P187, NONLINEAR DYNAM
   ZHANG HS, 1997, V31, P77, COMPUTER GRAPHICS

13/5/9   (Item 2 from file: 34)

03571788   Genuine Article#: PN594   Number of References: 0
                              (NO REFS KEYED)

Title: MODEL-BASED 3-D S●●E ANALYSIS FROM STEREOSCOPIC I●●E SEQUENCES

Author(s): KOCH R
Corporate Source: UNIV HANNOVER,INST THEORET NACHRICHTENTECH & INFORMAT
     ERARBEITUNG,APPELSTR 9A/D-30167 HANNOVER//GERMANY/

Abstract: A vision-based 3-D scene analysis system is described that is
     capable to model complex real-world scenes like buildings automatically
     from stereoscopic image pairs. Input to the system is a sequence of
     stereoscopic images taken with two standard CCD Cameras and TV lenses.
     The relative orientation of both cameras to each other is known by
     calibration. The camera pair is then moved throughout the scene and a
     long sequence of closely spaced views is recorded. Each of the
     stereoscopic image pairs is rectified and a dense map of 3-D surface
     points is obtained by area correlation, object segmentation,
     interpolation, and triangulation. 3-D camera motion relative to the
     scene coordinate system is tracked directly from the image sequence
     which allows to fuse 3-D **surface** measurements from different **view**
  points into a consistent 3-D model scene. The surface geometry of
     each scene object is approximated by a triangular surface mesh which
     stores the surface **texture** in a **texture**   map . From the **textured**
     3-D models, realistic looking image sequences from arbitrary view
     points can be synthesized using computer graphics.

 13/5/10   (Item 1 from file: 94)
DIALOG(R)File   94:JICST-EPlus

04474450   JICST ACCESSION NUMBER: 99A0912122   FILE SEGMENT: JICST-E
Features of HVAF (high-velocity flame) coating and film characteristics.
AKIMOTO KOICHI (1)
(1) Kokenvtekuno
ABSTRACT: This paper explains the titled HVAF flame spraying technology
     using WC cermet to modify metal material **surface** from the following
  viewpoints : 1) Principle; coating film formation on substrates set in
     high velocity jet flame generated by combustion of kerosene and
     compressed air using ultra high verocity collision energy, 2) merits;
     lower oxygen concentration in flame than HVOF methods, thus providing
     little decarburization and 3) characteristics of coating films (
  texture , wear resistance, impact resistance), **applications** and cost.
DESCRIPTORS: flame spraying; surface modification; cermet; tungsten carbide
     ; fast collision; collision energy; decarburizing; abrasion resistance;
     impact strength
BROADER DESCRIPTORS: thermal spraying; surface treatment; treatment;
     reforming; ceramics; carbide; carbon compound; carbon group element
     compound; tungsten compound; 6A group element compound; transition
     metal compound; collision; energy; removal; mechanical property;
     property; resistance(endure); strength
CLASSIFICATION CODE(S): YC02050V; WC08030N

01090916   INSIDE CONFERENCE ITEM ID: CN010683816
Improvements to GraphPack: A System to Manipulate Graphs and Digraphs
   Krishnamoorthy, M.; Suess, A.; Onghena, M.; **Oxaal, F.**
   CONFERENCE: Computational support for discrete mathematics-DIMACS
      workshop
   DIMACS SERIES IN DISCRETE MATHEMATICS AND THEORETICAL COMPUTER SCIENCE,
   1994; VOL 15 P: 279-296
   Providence, RI, American Mathematical Society, 1994
   ISBN: 0821866052
   LANGUAGE: English DOCUMENT TYPE: Conference Papers
      CONFERENCE EDITOR(S): Dean, N.; Shannon, G. E.
      CONFERENCE SPONSOR: NSF Science and Technology Center in Discrete
               Mathematics and Theoretical Computer Science
      CONFERENCE LOCATION: Piscataway, NJ
      CONFERENCE DATE: Mar 1992 (199203) (199203)

   BRITISH LIBRARY ITEM LOCATION: 3588.461700
   DESCRIPTORS: discrete mathematics; computational support; DIMACS;
      theoretical computer science

21/5/1   (Item 1 from file: 2)
DIALOG(R)File   2:INSPEC
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5586445   INSPEC Abstract Number: C9707-7330-020
 Title: **Generating high resolution data using hints**
   Author(s): Brody, B.; Boyd, E.; Olmsted, C.
   Author Affiliation: Alaska Univ., Fairbanks, AK, USA
   Journal: Proceedings of the SPIE - The International Society for Optical
Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA)
vol.3017   p.182-92
   Publisher: SPIE-Int. Soc. Opt. Eng,
   Publication Date: 1997 Country of Publication: USA
   CODEN: PSISDG ISSN: 0277-786X
   SICI: 0277-786X(1997)3017L.182:GHRD;1-Q
   Material Identity Number: C574-97094
   U.S. Copyright Clearance Center Code: 0 8194 2428 5/97/$10.00
 . Conference Title: Visual Data Exploration and Analysis IV
   Conference Sponsor: SPIE; Soc. Imaging Sci..& Technol
   Conference Date: 12-13 Feb. 1997   Conference Location: San Jose, CA,
USA
   Language: English   Document Type: Conference Paper (PA); Journal Paper
(JP)
   Treatment: Practical (P)
   Abstract: We describe an artistic project that uses scientific tools to
convey a sense of place. Detail is an important element in creating an
artistic sense of place. This detail must be consistent with what we know
about the correlation between topography and its **surface** appearance. The
vegetation and exposed rock in the mountains of the North Slope of the
Brooks Range (Arctic National Wildlife Refuge) are distinctly correlated
with the digital terrain. Analysis of elevation, slope, and aspect
generates tools used to create a probability mapping between the terrain
and the appearance of the **surface** . Digital painting techniques create
 texture   **maps**   that we **wrap**   **around** three dimensional models of the
terrain. We use these models in our animation of a traverse of the
landscape. These techniques aid in the development of high resolution
geometry. A persistent theme in this process is the use of visual metaphor
and visual thinking. Active geomorphology and the viscous flow of
vegetation characterize the northeastern mountains of the Brooks Range. The
vegetation exists, not so much in competition, but in response to solar
energy niches. Colony ecology is significant. The **surface** creeps in
response to the flow of water and ice. The ecology and topography appear
unmodified by human hands. One gets the impression that the forces of
nature are consistently and clearly expressed. Our art uses science to
create a representation of this dynamic landsċape. (4 Refs)
   Descriptors: art; biology computing; cartography; ecology; geomorphology;
image texture; probability
   Identifiers: high resolution data generation; hints; artistic project;
scientific tools; topography; **surface** appearance; exposed rock; mountains
; Brooks Range; Arctic National Wildlife Refuge; digital terrain;
probability mapping; digital painting techniques; **texture**   **maps** ; three
dimensional models; animation; high resolution geometry; visual metaphor;
active geomorphology; viscous flow; solar energy niches; colony ecology
   Class Codes: C7330 (Biology and medical computing); C7840 (Geography
and cartography computing); C6130B (Graphics techniques); C5260B (Computer
vision and image processing techniques); C1140Z (Other topics in statistics
); C7820 (Humanities computing)
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21/5/2   (Item 2 from file: 2)
DIALOG(R)File   2:INSPEC
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5032396   INSPEC Abstract Number: C9510-6130B-026
 Title: **Texture, displacement and immersion: a model for tree rendering**
   Author(s): Chover, M.; Vivo, R.; Quiros, R.; Lluch, X.

Author Affiliation: De⬤ de Inf., Univ. Jaume I, Castelⓛⓞn, Spain
Conference Title: WSCG 95 (Winter School of Computer Graphics and Visualisation 95). Third International Conference in Central Europe on Computer Graphics and Visualisation 95   Part vol.1   p.69-78 vol.1
Editor(s): Skala, V.
Publisher: Univ. West Bohemia, Plzen, Czech Republic
Publication Date: 1995 Country of Publication: Czech Republic   2 vol. 485 pp.
Conference Title: Proceedings of Third International Conference in Central Europe on Computer Graphics and Visualisation: Winter School of Computer Graphics
Conference Sponsor: Autodesk; DTP Studio; Inel; Silicon Graphics; CAdis; Hewlett Packard; Intergraph CR; et al
Conference Date: 14-18 Feb. 1995   Conference Location: Plzen, Czech Republic
Availability: Union Agency, Na Mazinach 9, 322 00 Plzen, Czech Republic
Language: English   Document Type: Conference Paper (PA)
Treatment: Practical (P)

Abstract: This paper presents a new method to generate realistic details on tree **surfaces** and structures. The method combines texture, displacement and immersion techniques. We use an extension of L-Systems, namely random L-Systems, to construct the tree, and represent its structure of branches using parametric **surfaces** (cones). Adding displacement at the **surface** level by means of 2D and 3D functions, and deviation at the structure level by immersion in a 3D function, we perturb the **surface** definition. The parametric definition of the **surface** is adequate to **apply textures** and reduces the spatial cost of the previous tree representations. In addition, the proposed technique can even manage further detail than previous ones. (20 Refs)
Descriptors: biology computing; image texture; realistic images; rendering (computer graphics)
Identifiers: image texture; image displacement; **image immersion** ; tree rendering; realistic details; L-Systems; random L-Systems; branches; parametric **surfaces** ; cones; 3D functions; 2D functions; **surface** definition; spatial cost
Class Codes: C6130B (Graphics techniques)